

WORKSPACE TOOLS V7.5 MANUAL

Product Manual

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1 INTRODUCTION

Workspace Tools is a simple and easy to use service for maintaining a backup of entire Avid edit workspaces (**Workspace Backup**) and/or synchronising Avid workspaces (**Workspace Sync**). Which of these two functions is available depends upon the licence installed and can be seen on the home page under the Licence title.

Workspace Backup can be used for creating and maintaining a backup of entire Avid edit workspaces and the Avid projects that use the media in them. It has the unique feature that individual projects or bins can be restored with their media. This has the benefit that in the event of a disaster critical projects can be restored quickly, well before the time it would take to restore the entire workspace(s). A separate task can be configured to tidy up the backup and remove files which were deleted from the workspace(s) more than a set number of days previously (the Retention Period).

Workspace Sync will allow a workspace to be synchronised with another workspace, ensuring the destination is a mirror of the source. This can provide for very fast turnaround business continuity.

Workspace Tools can be configured to regularly run Backup or Sync jobs on a particular day or at a particular time. It can write to any on-line storage.

In recent releases, Workspace Tools has been expanded to include addition job for **Project Backup** and **Host Backup**. These jobs are variations on the standard Workspace Backup job that cover project file only backups and Host level configuration of workspace backups. These will be detailed in later stages of this document.

The latest release also sees a fundamental update of the User Interface for Workspace Tools. The UI also supports both light and dark modes. This manual shows the UI in *Light Mode*.

1.1 PRINCIPLES

Workspace Tools runs as a service in the background on a server. This server must be connected to your Avid ISIS or NEXIS with an Avid certified Network Interface Card and must be running the ISIS or NEXIS client software.

Workspace Tools User interface is provided through a number of webpages. There are two addresses; one for an administrative user who can see and edit everything, and one for a normal user who can only review the Activity and History, but not edit anything.

Workspace Tools operates by running jobs which can be created, scheduled or run immediately. These jobs do the work of updating a backup or re-synchronising a workspace.

What functionality is available in Workspace Tools is dependent upon the licence loaded. The licence can enable **Workspace Backup** or **Workspace Sync** or both.

1.2 WORKSPACE BACKUP

The Workspace Backup functionality provides a backup onto tier two storage. In the unlikely (but potentially catastrophic) event that the primary system becomes unavailable for any reason, the backup provides access to all the media and project files, optionally at the individual bin level, to allow restoration to take place according to priorities.

The process involves several stages. First an analysis is conducted which builds a database of all the projects, bins and their media references and all the workspaces and their media. Then the entire contents of all the workspaces included in the backup configuration are copied to the destination storage, except directories or files that match the Exclusions list. Next any projects in the analysis that use any media that has been backed up are added to the backup. Finally, these projects are searched

for any media references that are not included in the backup (such as AMA or media on other workspaces) and these are added to the backup.

The next time the backup job runs, any new files on the workspaces will be added to the backup, the projects will all be backed up again and any new media referenced by them added to the backup.

A separate job, a Tidy Job, can be run to remove from the backup those files that have been deleted from the source workspace more than the retention period days ago.

1.2.1 HOST BACKUP JOB

A Host Backup job will preform a Workspace Backup on all the workspaces found under the detailed Host. The processing of the backup is the same as for a standard Workspace Backup.

The Host Backup allows the user to set up a backup job that will automatically backup all the workspaces on the Host and react to any addition or removal of workspaces.

Once a workspace is mounted (as a UNC path) in the Avid Nexis Client application, it will become available to Workspace Tools and will be included in the next Host Backup job.

For flexibility, the configuration will allow specific workspace to be excluded from the backup.

1.2.2 PROJECT BACKUP JOB

A Project Backup job will perform a backup of all the project files it finds in the configured location. It will not backup any media files. The project backup will add new versions of the projects each time the job is run.

In the event of any issues the Project Restore application will be able to restore a chosen project version or bin version from the backup.

The Project Backup can still be managed by a Tidy Job to remove projects after the configured retention period.

1.3 WORKSPACE SYNC

In some environments, the availability of multiple ISIS or NEXIS systems means that an alternative solution to the Business Continuity would be to mirror workspaces so that after a catastrophe, no restoration is required to get back up and running again.

The role of a Workspace Synchronisation job is to identify the changes on local workspaces and to push those changes to a remote system, including all file creations, modifications and deletions.

The job will perform in two phases; determining what the changes have been to the primary system, then replicating those changes to the mirrored system.

Workspace Synchronisation relies upon a last known state file – one for each workspace – which lists the files, their sizes and last modified timestamp on every file on the workspace.

When the job starts, it compares the current contents of the workspace with the contents of the last known state file to determine which files have been added, deleted or modified since the last known state file was previously written. Once the deltas have been determined, the last known state file is re-written with the current state.

The very first time the Synchronisation job is run for a workspace, there will be no *last known state* file for that workspace. In this instance, every file will be initially considered to be an addition.

The original files path will be converted to a path on the destination workspace and the destination workspace will be inspected to determine the details of the remote file if present.

New files added into the local system

- Files are missing from the Remote System
 - o Action: Copy the files
- Files are present on the remote system with a matching timestamp
 - o Action: Skip the file
- Files are present on the remote system with an older timestamp
 - o Action: According to the configuration, either overwrite or log
- Files are present on the remote system with a newer timestamp
 - o Action: Skip the file and log the action

Files modified on the local system

- Files are missing from the Remote System
 - o Action: According to the configuration, either copy or log
- Files are present on the remote system with a matching timestamp
 - o Action: Skip the file
- Files are present on the remote system with an older timestamp
 - o Action: Overwrite
- Files are present on the remote system with a newer timestamp
 - o Action: Skip the file and log the action

Files deleted from the local system

- Files are missing from the Remote System
 - o Action: Skip
- Files are present on the remote system with a matching timestamp
 - o Action: Delete
- Files are present on the remote system with a different timestamp
 - o Action: Skip the file and log the action

1.3.1 OPTION FOR SYNC TO NOT DELETE FROM THE DESTINATION

From version 7.5 onwards an extra option has been added into the Sync job that removes the deletion process from the sync functionality.

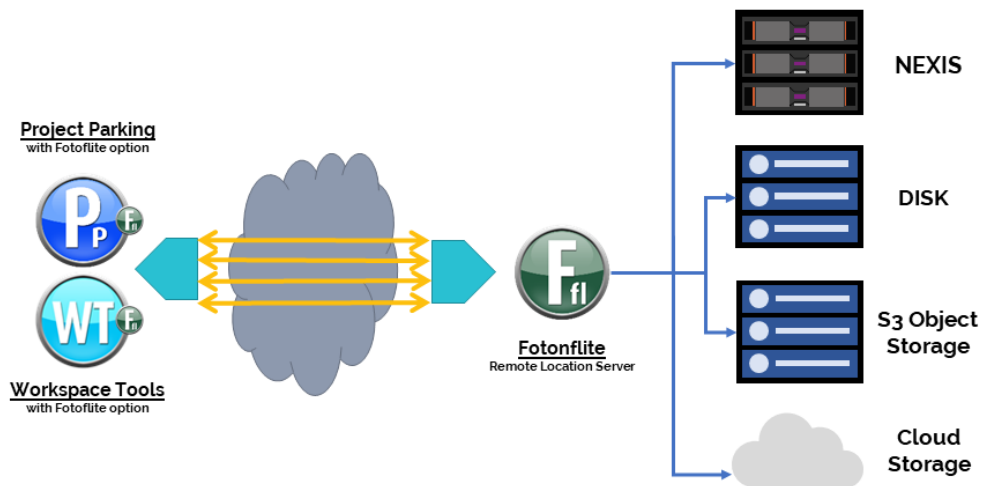
When this is enabled the Sync Job becomes a 'Push' process that will send content added in the source to the destination but will never remove anything from the destination.

This is useful for customer who are using the job to distribute content to a secondary system and want that system to run independently. The receiving system will have all of the content pushed from the source but will be able to choose how they want to use and manage the content without the risk that their copy of the content will be removed when the source system makes changes.

1.4 REMOTE SYSTEM ACCESS THROUGH MARQUIS FOTONFLITE

Marquis Fotonflite™ is a high-performance, secure 'on-the-fly', point-to-point transfer system for Avid Media Composer projects and media workspaces. It allows files to be moved between source Avid ISIS/NEXIS systems and a range of target storage types, including Avid, generic and proprietary storage. Fotonflite™ is unique in its ability to directly connect and securely synchronise live Avid ISIS/NEXIS systems, especially with Avid work-in-progress, and is ideal for connecting production centres over the internet, for example, Pinewood and Hollywood.

Fotonflite™ is an option for Marquis Workspace Sync, Workspace Backup and Project Parking professional production workflow tools, which are all Avid-certified.



Fotonflite™ allows the local Marquis application™ to securely access a remote site and use the storage devices on that site as if the application was running there.

There are two modes of operation for the Fotonflite Remote Location Server: -

- Workspaces: For Workspace Sync jobs, the remote service will automatically present workspaces that are mounted on the server to the 'client' connection. No configuration is required.
- Archive Locations: Devices in the remote system can be configured within the Remote Location Server manager. These devices will then be presented to the 'client' connection

There are two parts to the Fotonflite solution: -

- Fotonflite Remote Location - Client Option
 - o Optional function available within Project Parking and Workspace Tools
- Fotonflite Remote Location Server
 - o Management service operating on the 'Remote' site

This document presumes that any Remote Fotonflite service has already been installed and configured. Please see separate documentation for the configuration details.

From v7.5 onwards, the Fotonflite service can also be used in coordination with the parent Workspace Tools system to calculate checksums locally to secure the accuracy of file transfers without adding a requirement for the files to be read back to the source system.

2 SYSTEM INSTALLATION AND CONFIGURATION

2.1 BEFORE INSTALLATION

Workspace Tools is a Windows server application.

2.1.1 DEVICE CONFIGURATION

The server should be running Server 2016. Workspace Tools cannot be installed on Mac systems. You can install Workspace Tools on any server that has network access to the directories that contain the Avid projects you wish to archive and the workspaces that contain the media that they refer to.

It is recommended that the server should have an Avid qualified network card. Problems reading and writing to the ISIS or Unity could result if this is not the case.

Minimum specification:

- Windows Server 2016
- 64-bit Hardware
 - Intel i-series processor (i3/i5/i7)
 - 16 Gigabytes RAM minimum, it may be necessary to have more in larger environments
- Network connectivity
 - NIC connecting to Avid storage MUST be of a type compatible with the Avid storage environment
 - NICs or Fibre connections connecting to other storage need to be compatible with that storage
 - Avid NEXIS connection client licence to allow connection to the NEXIS

2.1.2 AVID SYSTEMS

Although Workspace Tools must run on a Windows server it can archive projects created on a Mac based Media Composer that are stored on shared storage, or on local storage that is shared.

2.1.3 STORAGE

The media can be stored on any storage which the Windows operating system can write to as a mapped drive or network path, including Avid NEXIS or Avid ISIS. If you wish to access Avid shared storage and the workstation does not have Avid already installed on it you will need to install Avid NEXIS or ISIS Client software.

There should be adequate free space on the storage for any operations that you plan to take. Filling up the storage will have unpredictable consequences in both Avid Media Composer and Workspace Tools.

2.2 INSTALLATION

1. If requested to do so when installing Workspace Tools, install .NET framework by double clicking "NDP461-KB3102436-x86-x64-ALLOS-ENU.exe"
2. Install Workspace Tools by double clicking "WorkspaceToolsInstaller.msi"
3. Accept the licence agreement
4. The Installer will present a list of storage system options, including S3 and Azure. Ensure any that are required are enabled
5. If a connection is required to a Remote Fotonflite Service, ensure the Remote Location Support option is also enabled
6. Allow the installation to complete

2.3 SERVER CONFIGURATION

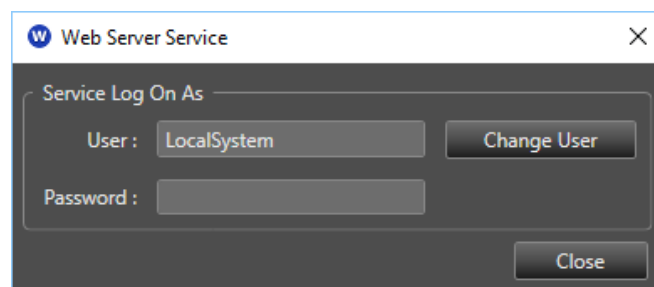
On the machine on which you installed Workspace Tools..

Run the Workspace Tools Configuration utility

The first time this is run it will configure the Windows firewall to allow access to the websites and the Workspace Tools service. This is also a convenient time to verify that the services are running and to verify that the websites can be reached.

The Services are installed with the "Local System" user account. The configuration applications allows this to be altered but this should not need to be changed. If a different account is entered, perhaps to allow authentication to other servers, we recommend that this account should also be a 'Local Administrator' on the server.

The user account can be altered by selecting the service in the configuration application and pressing the *Edit* button.



Then, enter the user account and password before pressing the *Change User* button.

2.3.1 WEB SERVICES

Select the Workspace Tools Web Service and verify that the Workspace Tools Service is running. If it is not, then select the Workspace Tools Service and press the Start button.

2.3.2 WEB SITES

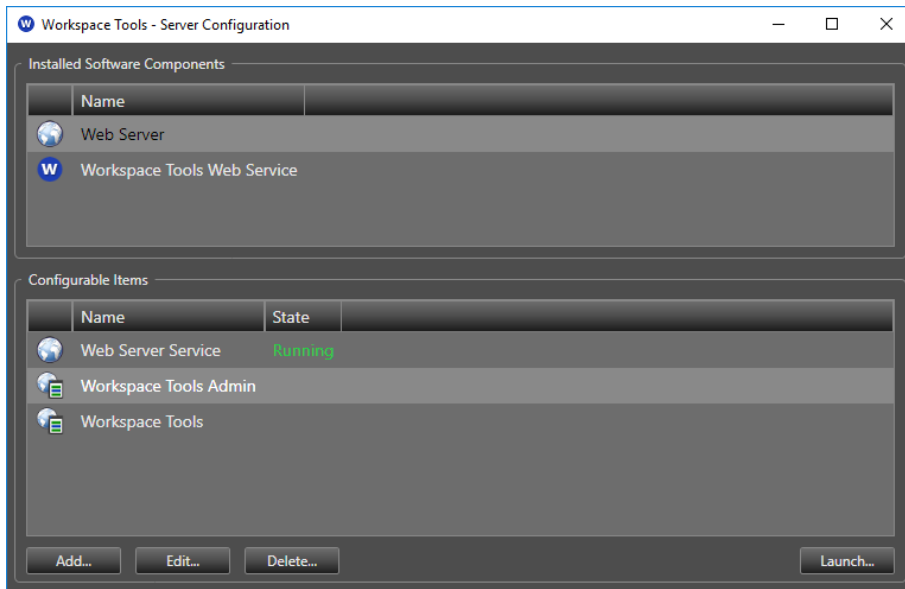
Select the Web Server and verify that the Web Server Service is running. If it is not, then select the Web Server Services and press the Start button.

Two Workspace Tools webpages are available:

http://wstools_server_name/wstoolsadmin/ for the administrator, or

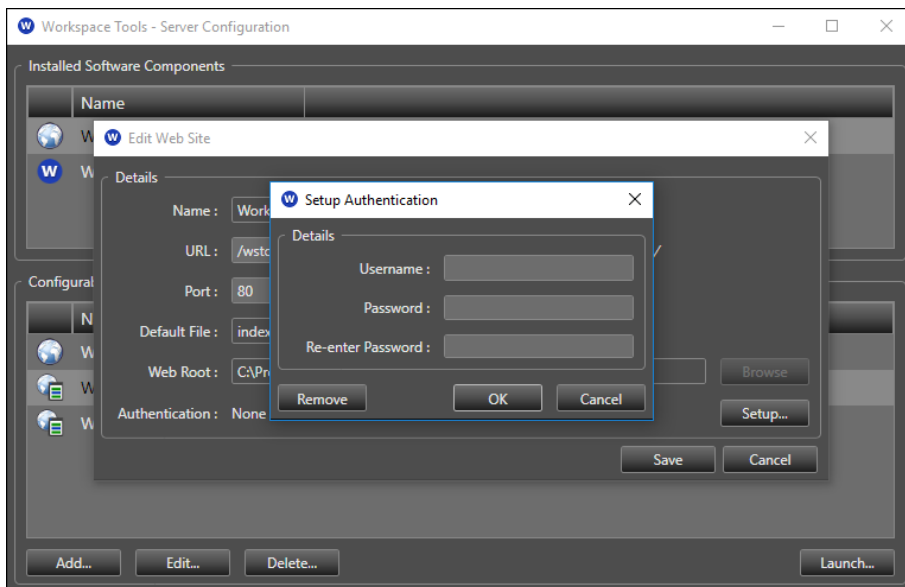
http://wstools_server_name/wstools/ for the restricted, read only user.

Test them by selecting Workspace Tools Admin and pressing Launch, and again for Workspace Tools.



These should also be available remotely at the URLs above (where `wstools_server_name` is replaced with the name of the server you have installed Workspace Tools on).

If authentication is desired to prevent unauthorised access to Workspace Tools, then edit the sites and Setup Authentication.



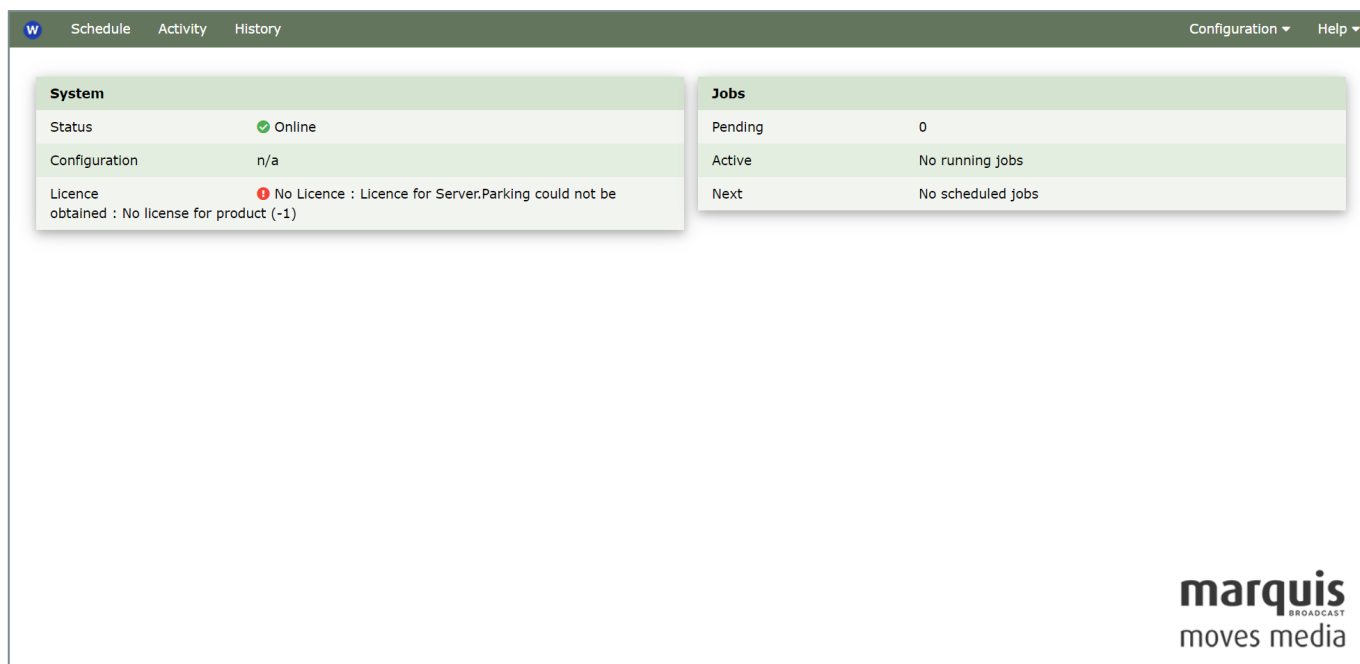
2.4 WORKSPACE TOOLS CONFIGURATION

Upon first installation, you should at least...

- Licence the product
- Configure Project Locations (for Workspace Backup only)
- Configure Workspaces
- Consider running a Performance Test job
- Create a first Backup or Sync job

2.5 SYSTEM LICENCING

When Workspace Tools is started for the first time it will report an error in the *Licence* section of the home screen.



Go to the configuration menu at the right-hand side and select Configuration and then Licence from the drop-down list.



The Licence page shows information about your licence and the "Server Host ID" of the computer running Workspace Tools.

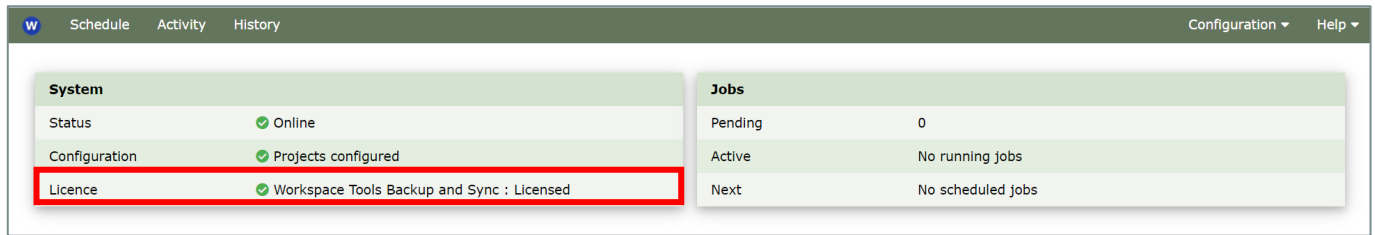
Licences of Workspace Tools are associated with a particular computer, identified by the "Server Host ID" which is 8 hexadecimal characters. Send details of the "Server Host ID" to Marquis, who will produce and return the correct Licence.

When you receive the licence file (perhaps "1.lic") save it to your desktop, then use the "Select new licence file to upload" button to select it and import it.

Afterwards you can delete it from your desktop.

If you have a time limited evaluation licence and fail to extend the licence before its expiry date the Licence Window will show that the licence has expired and none of the Workspace Tools jobs will run.

The licence details can always be seen in the *Licence* section of the home page.



The screenshot shows the Workspace Tools home page with a dark green header containing navigation links: 'W', 'Schedule', 'Activity', 'History', 'Configuration', and 'Help'. The main content area is divided into two panels: 'System' and 'Jobs'. The 'System' panel lists 'Status' as 'Online', 'Configuration' as 'Projects configured', and 'Licence' as 'Workspace Tools Backup and Sync : Licensed'. The 'Licence' row is highlighted with a red border. The 'Jobs' panel shows 'Pending' as '0', 'Active' as 'No running jobs', and 'Next' as 'No scheduled jobs'.

System	
Status	Online
Configuration	Projects configured
Licence	Workspace Tools Backup and Sync : Licensed

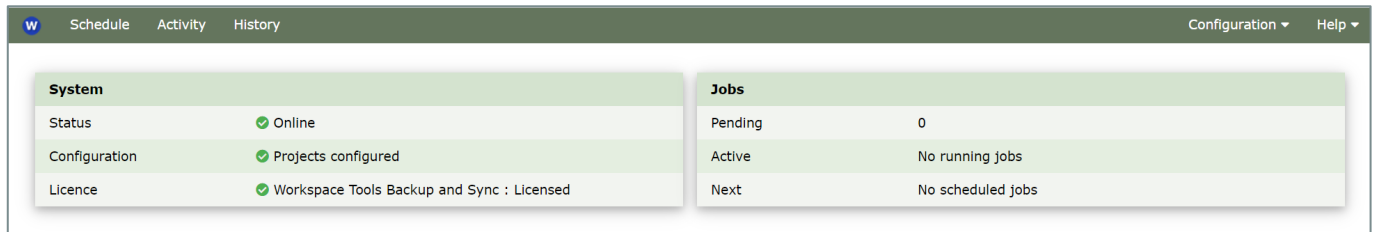
Jobs	
Pending	0
Active	No running jobs
Next	No scheduled jobs

3 THE WORKSPACE TOOLS WEBPAGES

3.1 HOME PAGE

The home page for the Workspace Tools system contains a selection of summary information on the status of the system.

The administrator interface available at http://wstools_server_name/wstoolsadmin/

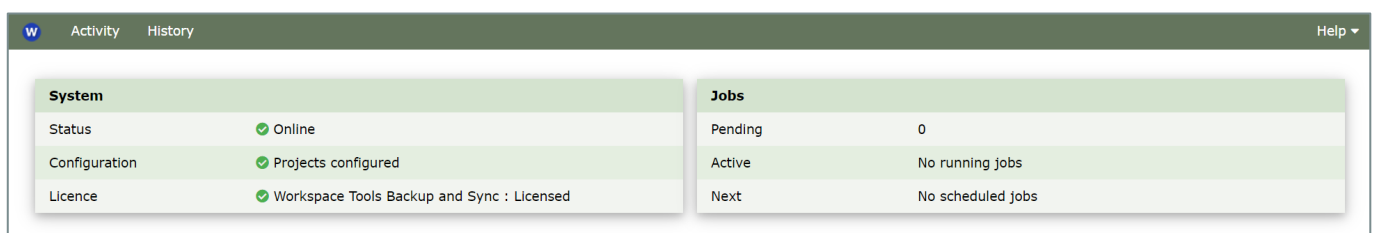


The screenshot shows the administrator interface with a dark green header containing 'w', 'Schedule', 'Activity', 'History', 'Configuration', and 'Help'. Below the header are two panels: 'System' and 'Jobs'.

System	
Status	Online
Configuration	Projects configured
Licence	Workspace Tools Backup and Sync : Licensed

Jobs	
Pending	0
Active	No running jobs
Next	No scheduled jobs

The restricted user interface available at http://wstools_server_name/wstools/



The screenshot shows the restricted user interface with a dark green header containing 'w', 'Activity', 'History', and 'Help'. Below the header are two panels: 'System' and 'Jobs'.

System	
Status	Online
Configuration	Projects configured
Licence	Workspace Tools Backup and Sync : Licensed

Jobs	
Pending	0
Active	No running jobs
Next	No scheduled jobs

Note that the Schedule and Configuration menu items are not available in the restricted view.

3.1.1 SYSTEM STATUS MESSAGES

The status messages will show the health of the system and warn if there are any problems. They will show green in normal operations and red if there is an issue. This page automatically updates the status every 10 seconds.

System: The System section will check for the status of the background services and will be green as long as there is a connection.

Configuration: The Configuration section will show red when the system is not configured (only when licenced for Workspace Backup)

Licence: The licence section will show the details of the current licence and will turn red if this system is unlicensed or if there is an issue with the current licence.

3.1.2 JOBS

Pending Jobs: The number of jobs queued for processing.

Active Job: The details of any currently active job

Next Job: The details of the next scheduled job and the time it is due to be started.

3.1.3 SCHEDULE

Will display the Schedule page which shows all the scheduled jobs to backup or synchronise workspaces, allow you to add new ones, edit existing ones or delete them.

This page is only available from the Administration URL.

3.1.4 ACTIVITY

Will display what jobs that are in progress and any messages about them.

3.1.5 HISTORY

This will display a page which lists all the jobs which have been run on the system and what their outcome status was.

These jobs can then selected and opened to display more detailed messages.

3.1.6 CONFIGURATION

This menu allows you to access the configuration settings for Workspace Tools.

These include the general behaviour of the service, the location of projects and workspaces and the logging of information. It also allows you to set times when Workspace Tools will not run any jobs and to see the licence information.

This page is only available from the Administration URL and will only show the configuration options that are appropriate for the licenced function (Workspace Backup or Workspace Sync or both).

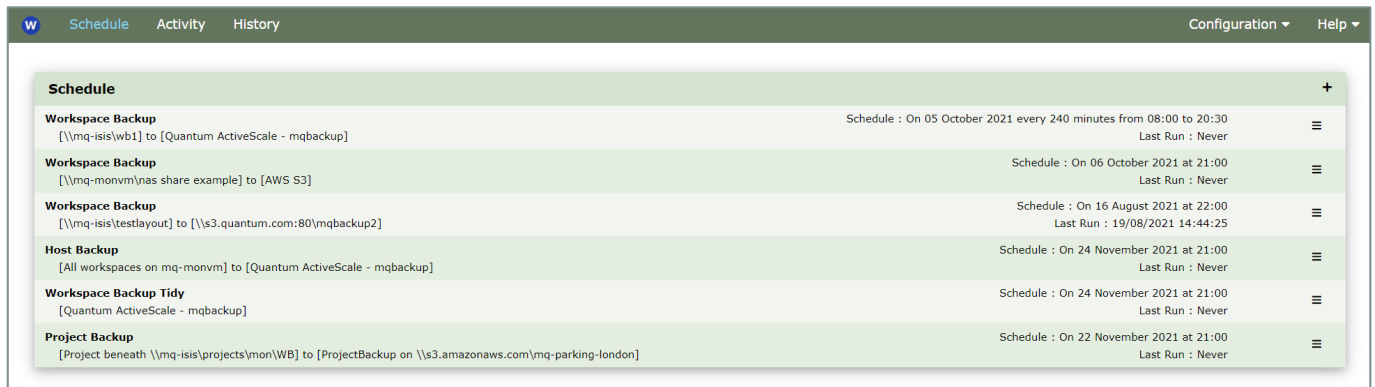
3.1.7 HELP

The Help page will allow users to open the full manual, expand relevant "In-Line" help within the current page and to open the 'About' details for the Workspace Tools system (including the version number and location of the core server).

3.2 SCHEDULE

This page allows you to create, edit and delete jobs. This page is only available from the Administration URL.

Which jobs you can create depend upon the Workspace Tools licence.




Job Name	Source/Target	Schedule	Last Run
Workspace Backup	[\Vm-q-isis\wb1] to [Quantum ActiveScale - mqbackup]	Schedule : On 05 October 2021 every 240 minutes from 08:00 to 20:30	Last Run : Never
Workspace Backup	[\Vm-q-monvm\nas share example] to [AWS S3]	Schedule : On 06 October 2021 at 21:00	Last Run : Never
Workspace Backup	[\Vm-q-isis\testlayout] to [\\s3.quantum.com:80\mqbackup2]	Schedule : On 16 August 2021 at 22:00 Last Run : 19/08/2021 14:44:25	
Host Backup	[All workspaces on mq-monvm] to [Quantum ActiveScale - mqbackup]	Schedule : On 24 November 2021 at 21:00	Last Run : Never
Workspace Backup Tidy	[Quantum ActiveScale - mqbackup]	Schedule : On 24 November 2021 at 21:00	Last Run : Never
Project Backup	[Project beneath \Vm-q-isis\projects\mon\WB] to [ProjectBackup on \\s3.amazonaws.com\mq-parking-london]	Schedule : On 22 November 2021 at 21:00	Last Run : Never

The Schedule pane shows the details of the currently configured jobs. It will also show:

- **Type:** The Type of the job scheduled. The job types are detailed in the next section.
- **From:** The source workspace.
- **To:** The destination for the job.
- **Schedule:** The next run date & time for the job.
- **Last Run:** The date and time of the last occasion the job was processed, where applicable.

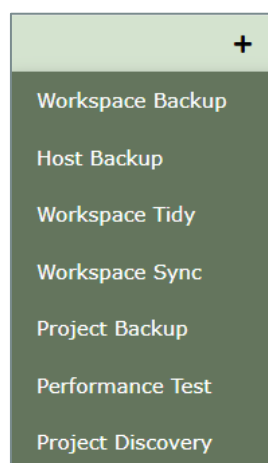
The jobs available within Workspace Tools will depend on the variant of the system that was ordered, Workspace Backup, Workspace Sync or both.

Jobs are edited by selecting the  icon on the right of each job in the schedule.

Jobs are added by selecting the '+' button on in the top right of the Schedule bar.



This will open a list of the available jobs.



3.2.1 WORKSPACE BACKUP

The Workspace Backup job will create, or update a backup of one or more workspaces, associated projects, and additional media.

This option is only available with a licence that includes Workspace Backup.

3.2.2 HOST BACKUP

The Host Backup job will create or update a backup for all of the workspaces found under the detailed host, including associated projects and additional media.

This option is only available with a licence that includes Workspace Backup.

3.2.3 WORKSPACE TIDY

A Tidy Job will tidy up a specific backup and delete files which have been removed from the source workspace longer ago than the specified retention period.

This option is only available with a licence that includes Workspace Backup.

3.2.4 WORKSPACE SYNC

A Workspace Sync job will synchronise one or more source workspaces with a matching number of destination workspaces.

This option is only available with a licence that includes Workspace Sync.

3.2.5 PROJECT BACKUP

The Project Backup job will create or update a backup of Media Composer project files that will not take any media files. This creates a versioned backup from which the user can restore projects or bins from projects using the Project Restore application provided with Workspace Tools.

3.2.6 PERFORMANCE TEST

The Performance Test will run through a selection of different settings to find the optimal values for a specific environment and achieve the best possible transfer speed between the Edit Shared Storage and tier 2 storage.


The Performance Test is available in all variants of Workspace Tools.

3.2.7 PROJECT DISCOVERY

This job will automatically search for project locations on mounted file systems and add them to the configuration.

This option is only available with a licence that includes Workspace Backup.

3.2.8 JOB MANAGEMENT

Each scheduled job can be managed by selecting the  icon on the right of each job in the schedule.

This will give three options:-

3.2.8.1 EDIT JOB

To change the details of a scheduled job, choose the **Edit** option from the drop-down list.

The system will then open the details page of the required job and allow the settings to be changed.

Press **Save** to accept the changes to the job.

3.2.8.2 DELETE JOB

To delete a currently scheduled job, choose the **Delete** option from the drop-down list.

The system will show a warning window and ask you to confirm the action. Once confirmed the job will be removed from the list. Note that this will not stop the job if it has already started running.

3.2.8.3 RUN NOW

Choosing the ***Run Now*** button will immediately run the job, regardless of the scheduled time for the next processing. This will be an additional processing for the job and the details for the time of the next scheduled job will remain the same.

Once the job has been selected to be run the job is added to the queue in the ***Activity*** section.

3.3 ACTIVITY

The Activity page shows the progress on the current active job and any messages generated by the processing of this job.

Activity

Workspace Sync - Processing
Synchronising files
C:\media\mxf\1080i50_XDCAMHD50_1_Min_Full.mxf

Console

26-Nov-2021 13:15:29 Copying file [C:\media\mxf\1080i50_AVCLGOP50_1Min_01.mxf] to [D:\media\mxf\1080i50_AVCLGOP50_1Min_01.mxf]
26-Nov-2021 13:15:34 Updating workspace state with addition of file [C:\media\mxf\1080i50_AVCLGOP25_1Min_01.mxf]
26-Nov-2021 13:15:34 Destination file [D:\media\mxf\1080i50_XDCAMHD50_1_Min_Full.mxf] does not exist. Copying [C:\media\mxf\1080i50_XDCAMHD50_1_Min_Full.mxf].
26-Nov-2021 13:15:34 Copying file [C:\media\mxf\1080i50_XDCAMHD50_1_Min_Full.mxf] to [D:\media\mxf\1080i50_XDCAMHD50_1_Min_Full.mxf]
26-Nov-2021 13:15:38 Updating workspace state with addition of file [C:\media\mxf\1080i50_AVCLGOP50_1Min_01.mxf]
26-Nov-2021 13:15:38 Destination file [D:\media\mxf\Premiere_1080p25_AVCI_100.mxf] does not exist. Copying [C:\media\mxf\Premiere_1080p25_AVCI_100.mxf].
26-Nov-2021 13:15:38 Copying file [C:\media\mxf\Premiere_1080p25_AVCI_100.mxf] to [D:\media\mxf\Premiere_1080p25_AVCI_100.mxf]
26-Nov-2021 13:15:42 Updating workspace state with addition of file [C:\media\mxf\1080i50_XDCAMHD50_1_Min_Full.mxf]
26-Nov-2021 13:15:42 Destination file [D:\media\mxf\TM_50_1080i_XDCAM-50_5-Min_MDWY-3.1.0.52.mxf] does not exist. Copying [C:\media\mxf\TM_50_1080i_XDCAM-50_5-Min_MDWY-3.1.0.52.mxf].
26-Nov-2021 13:15:42 Copying file [C:\media\mxf\TM_50_1080i_XDCAM-50_5-Min_MDWY-3.1.0.52.mxf] to [D:\media\mxf\TM_50_1080i_XDCAM-50_5-Min_MDWY-3.1.0.52.mxf]

Show most recent 10 100 1000 All Messages Auto-scroll

marquis
BROADCAST
moves media

3.3.1 ACTIVITY

The **Activity** pane gives information about the status of the systems recent actions. Jobs will be displayed as they are processed with the progress and status being shown. Once they are completed the **Status** will be updated and the jobs will be removed from the list.

The detail of the job can be seen in the console section.

3.3.2 CONSOLE

The **Console** pane is used to report on key information, warnings and errors encountered during various operations.

The amount of detailed shown within the console is controlled within the **Logging** section of the configuration (for administrative users).

You can control and/or filter the Console to only show most recent items. The amount of detail shown for the job can be altered within the drop down selection. This will filter the list to show either all Jobs, those with errors or those with errors and/or warnings.

3.4 HISTORY

The History page shows all the jobs that have been run and what their final status was.



Selecting a job will open the details within the Job Details section below.

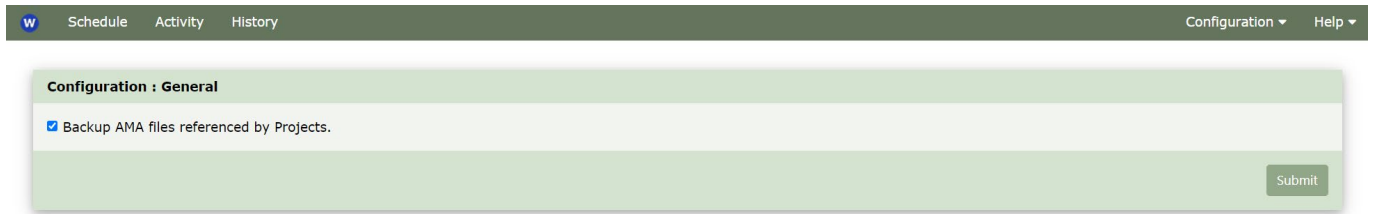
Job Details: This section shows the individual messages generated during the processing in detail. The amount of detail shown can be altered within the drop-down selection. This will filter the list to show either all Jobs, those with errors or those with errors and/or warnings.

4 CONFIGURATION OPTIONS

The configuration options shown will react to the type of operation that is licenced and different options will be available for workflows that use only Workspace Backup or Workspace Sync.

4.1 GENERAL

Available for systems licensed to perform Workspace Backups.



Backup AMA files referenced by Projects: This sets the default behaviour used by the application when backing up Workspaces, instructing whether AMA files will be included in, or excluded from, the backup. This behaviour can be overridden when required during the scheduling of the *Backup Job*.

Submit: Pressing *Submit* will commit the changes to the system. Any changes must be submitted before the user navigates away from the page, otherwise the changes will not be applied.

4.2 PROJECT LOCATION

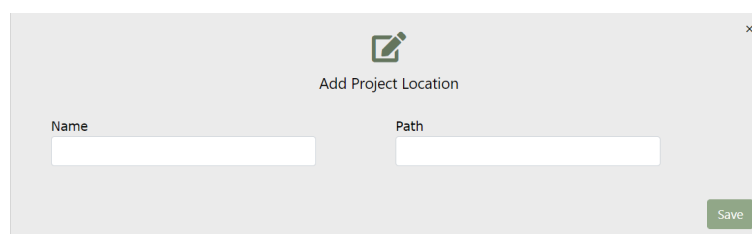
This option will be shown in systems using the Workspace Backup option.

Projects should be located in mounted file systems where Workspace Backup can find them. If they are distributed across many workspaces, then it may be easiest to start by creating and running a *Project Discovery* job first.

The Project Locations Configuration page is used to manage the folders that the Workspace Backup Job will look for Avid projects.



To add a new project location, click on the '+' button in the configuration title bar. This will open the following dialogue.



Name: Enter a descriptive name for the project location.

Path: Enter the path to the project location. The folder should be at the highest level of the Avid projects folder. Do not set it within a project folder as the analysis of the project will then be incomplete.

- It is important to add project locations at the right level:
 - o Ensure that the Project Location is set at or above the location of project folders. Setting Project Locations to within a project folder will lead to incomplete project archives.
 - o Projects locations should be configured to use UNC paths wherever possible as issues can be caused where drive letters are used and then re-mapped to another letter in the future. By using the UNC path as a Project Location the path will remain correct throughout the operations.

Press **Save** to confirm the addition and return you to the main Project Locations page.

To altering existing configurations the following are available from the button on each item:-

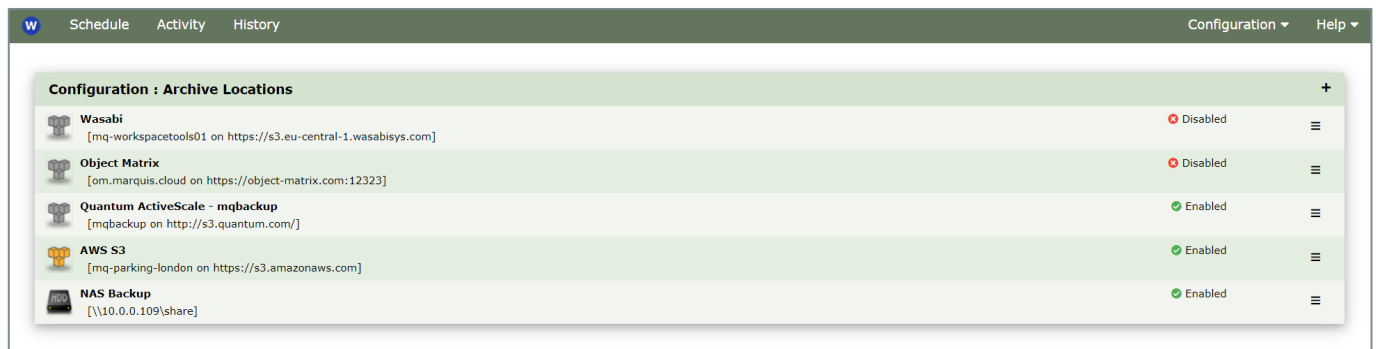
- **Edit:** Allows you to edit an existing location to either change its folder or the name that appears in the Project Tree display.
- **Delete:** Removes a location from the list.
- **Enable / Disable:** Allows the configuration to be enabled and disabled.

Submit: Pressing **Submit** will commit the changes to the system. Any changes must be submitted before the user navigates away from the page, otherwise the changes will not be applied.

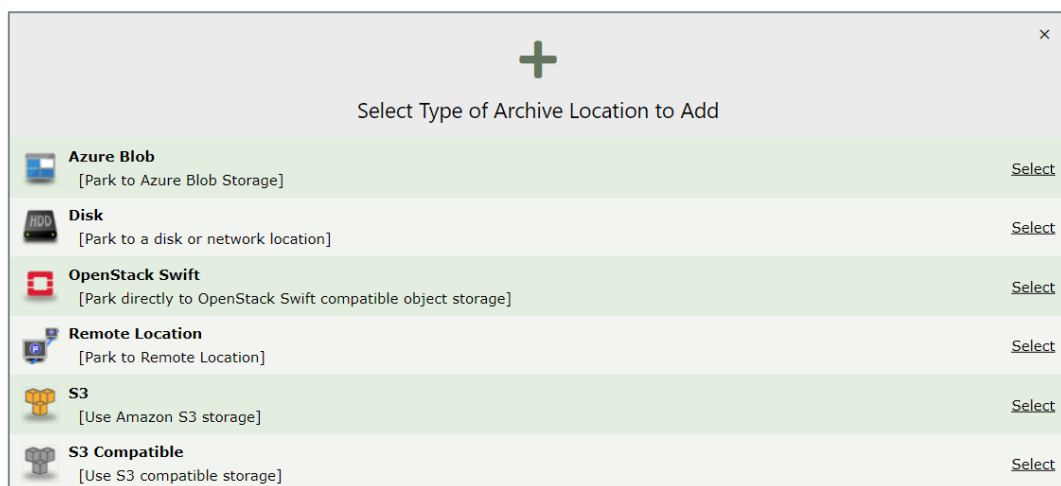
4.3 ARCHIVE LOCATIONS

This option will be shown in systems using the Workspace Backup option.

Archives can be written to any mounted file system or to some specific archive systems. Use the Archive Locations configuration to identify where you want archives to be written to and to set up the connection details for those locations or systems.



Press the '+' button to add a new archive location.



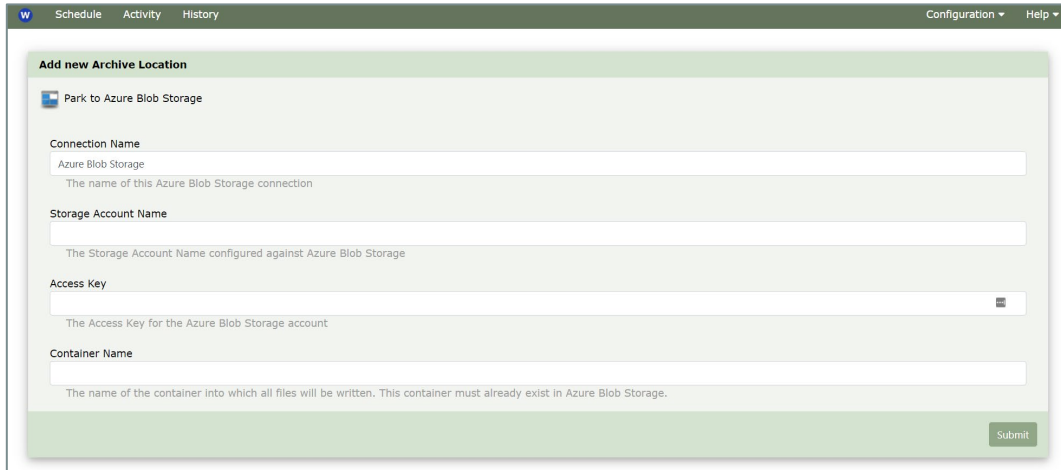
Depending upon your installed options you will see several options: -

- **Azure Blob:** Backup to Microsoft Azure Blob storage
 - o Shown when the Azure option is included during installation
- **Disk:** Backup to a disk or network location, shown in all installations
- **OpenStack Swift:** Backup to OpenStack Swift compatible storage systems
 - o Shown when the Swift option is included during installation
- **Remote Location:** Backup to a Fotonflite connected remote location
 - o Shown when the Remote Location option is included during the installation
 - o Requires a Fotonflite remote location service to be operating in the remote system
- **S3:** Backup to AWS S3
 - o Shown when the S3 options is included during installation
- **S3 Compatible:** Backup to AWS S3 compatible storage
 - o Shown when the S3 options is included during installation

Each type of archive location has a different setup screen.

4.3.1 MICROSOFT AZURE BLOB ARCHIVE LOCATIONS

The archive location can be set to use Microsoft's Azure Blob storage.



The screenshot shows a web application window titled 'w' with tabs for 'Schedule', 'Activity', and 'History'. The main content area is titled 'Add new Archive Location' and features a green header with a 'Park to Azure Blob Storage' icon. Below the header, there are four input fields: 'Connection Name' (with a placeholder 'Azure Blob Storage' and a tooltip 'The name of this Azure Blob Storage connection'), 'Storage Account Name' (with a tooltip 'The Storage Account Name configured against Azure Blob Storage'), 'Access Key' (with a tooltip 'The Access Key for the Azure Blob Storage account'), and 'Container Name' (with a tooltip 'The name of the container into which all files will be written. This container must already exist in Azure Blob Storage.'). A 'Submit' button is located at the bottom right of the form.

This requires the following details to be configured.

Connection Name: The name of the connection as it will appear in the UI.

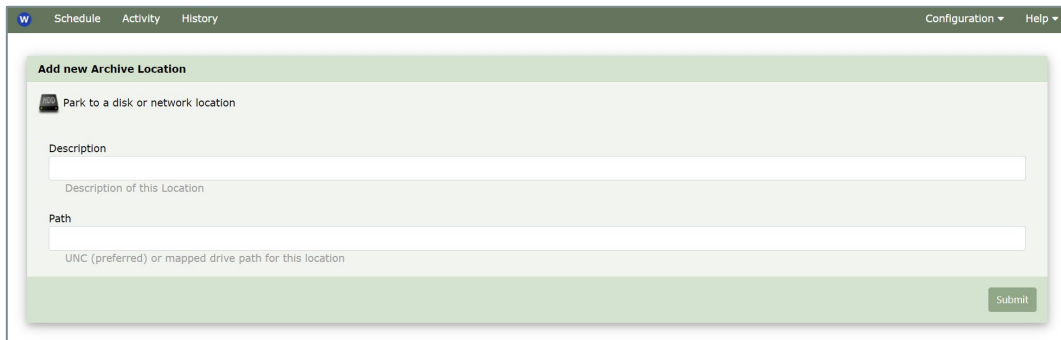
Storage Account Name: The Storage Account Name configured in the Azure Blob Storage.

Access Key: The Access Key provided for the Azure Blob storage account.

Container Name: The name of the container into which Workspace Tools will write all the files. This container must already exist in the Azure Blob storage.

4.3.2 DISK ARCHIVE LOCATIONS

The archive location can be set to a standard disk location and requires the following configuration to be entered.

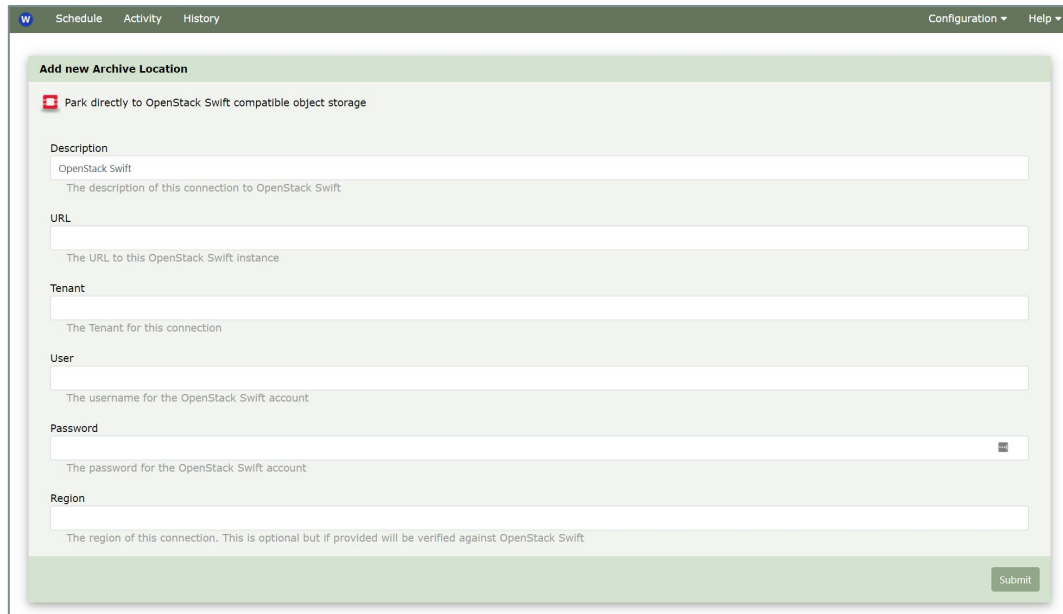


The screenshot shows a web application window titled 'w' with tabs for 'Schedule', 'Activity', and 'History'. The main content area is titled 'Add new Archive Location' and features a green header with a 'Park to a disk or network location' icon. Below the header, there are two input fields: 'Description' (with a tooltip 'Description of this Location') and 'Path' (with a tooltip 'UNC (preferred) or mapped drive path for this location'). A 'Submit' button is located at the bottom right of the form.

- **Description:** Text that will be displayed in the UI to identify the location
- **Path:** The path for this location. Where possible a UNC path is the preferred option

4.3.3 OPENSTACK SWIFT COMPATIBLE ARCHIVE LOCATIONS

The archive location can be set to use Amazon S3 storage or any of the other storage systems that are compatible with S3.



This requires the following details to be configured.

Description: The name of the connection as it will appear in the UI.

URL: The URL used to connect to this SwiftStack instance.

Tenant: The tenant will detail the customer account that will be connected to. This will be as provided by the storage system and will be checked as part of the authentication process.

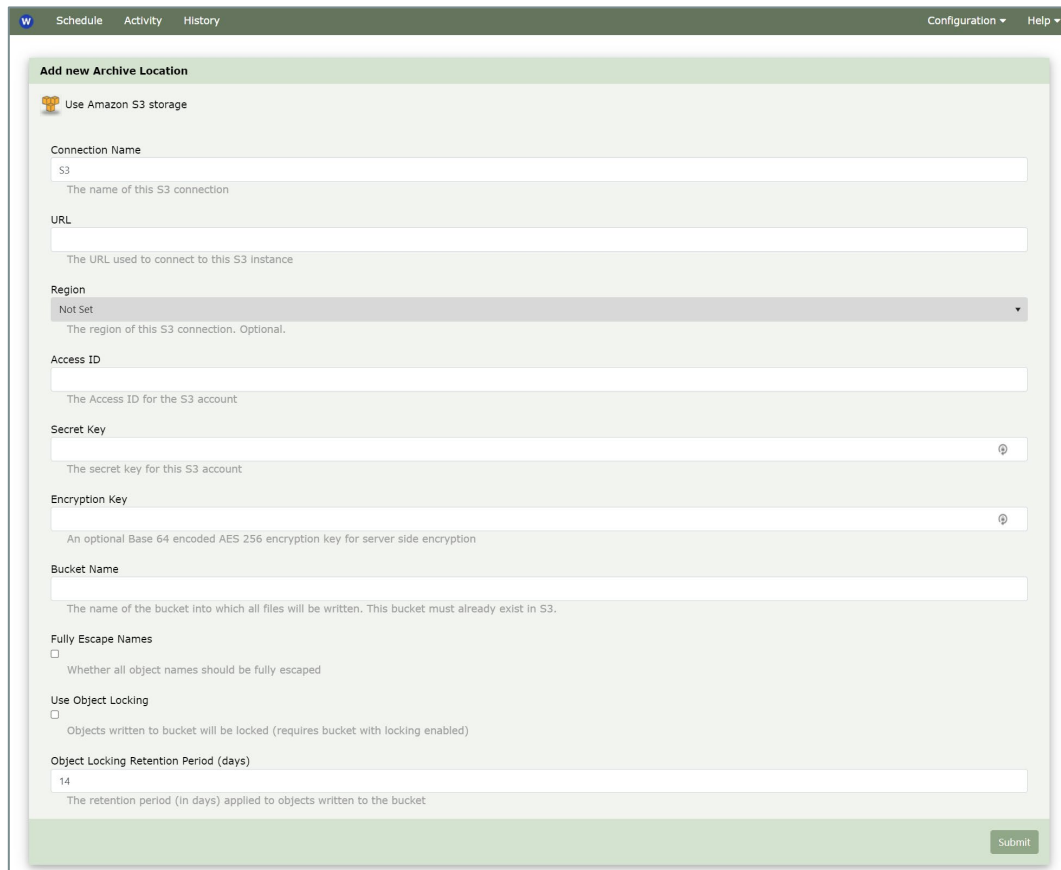
User: The User Account provided by the storage system.

Password: The password for the configured storage system user.

Region: The region of this connection. This is optional but if provided will be verified against OpenStack Swift. Under most circumstances the region can be left blank as the region information will be identified from the other connection details.

4.3.4 AMAZON S3 ARCHIVE LOCATIONS

The archive location can be set to use Amazon S3.



The screenshot shows a web interface for configuring an Amazon S3 archive location. The form is titled "Add new Archive Location" and includes a checkbox for "Use Amazon S3 storage". Below this, there are several input fields and a dropdown menu:

- Connection Name:** A text input field containing "S3".
- URL:** A text input field.
- Region:** A dropdown menu currently set to "Not Set".
- Access ID:** A text input field.
- Secret Key:** A text input field with a toggle for visibility.
- Encryption Key:** A text input field with a toggle for visibility.
- Bucket Name:** A text input field.
- Fully Escape Names:** A checkbox that is unchecked.
- Use Object Locking:** A checkbox that is unchecked.
- Object Locking Retention Period (days):** A text input field containing "14".

A "Submit" button is located at the bottom right of the form.

This requires the following details to be configured.

Connection Name: The name of the connection as it will appear in the UI.

URL: The URL used to connect to this S3 instance.

Region: This is the region of the S3 connection. If this is the URL this value can be left as 'Not Set'.

Access ID: The Access ID for this S3 account.

Secret Key: The secret key for this S3 account.

Encryption Key: Optional Base 64 encoded AES encryption key for server-side encryption on AWS.

Bucket Name: This is the name of the S3 'Bucket' into which all the files will be written. This bucket must already exist in the S3 system.

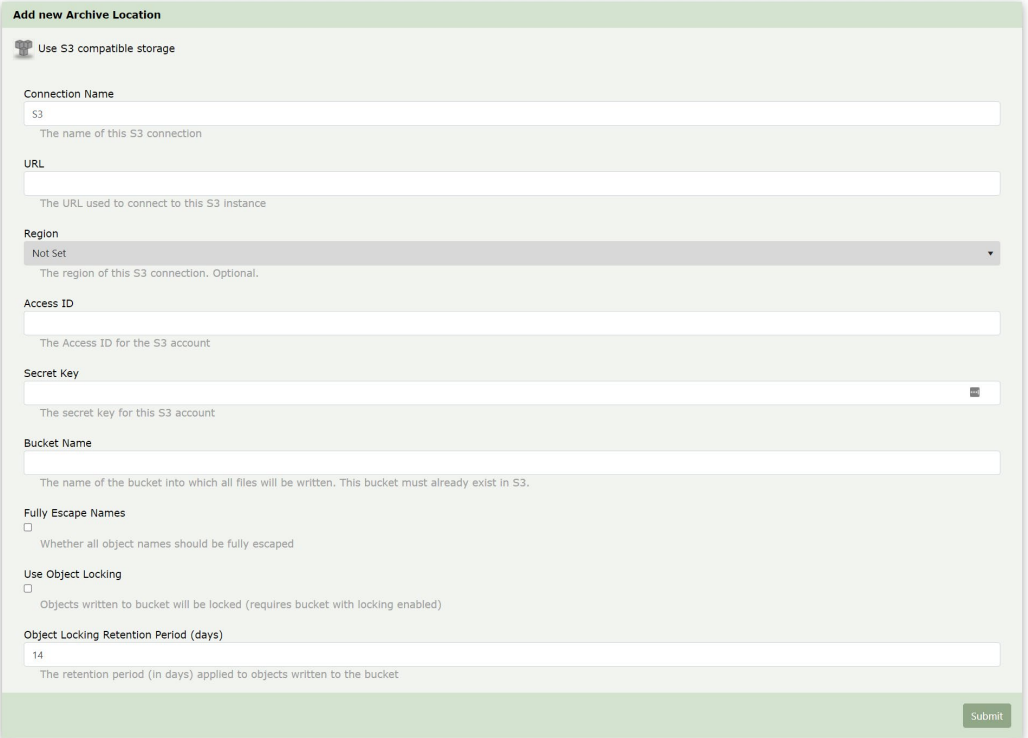
Fully Escape Names: Some storage systems require all object names to be fully escaped.

Use Object Locking: Objects written to bucket will be locked (requires bucket with locking enabled). Locking enabled buckets must not have a default retention period set.

Object Locking Retention Period (days): The retention period (in days) applied to objects written to the bucket.

4.3.5 S3 COMPATIBLE ARCHIVE LOCATIONS

This option should be chosen for archive systems that have implemented S3 compatible integrations.



The screenshot shows a web interface for configuring a new S3 compatible archive location. The form is titled "Add new Archive Location" and includes a sub-header "Use S3 compatible storage". The form fields are as follows:

- Connection Name:** A text input field containing "S3". Below it is the description: "The name of this S3 connection".
- URL:** An empty text input field. Below it is the description: "The URL used to connect to this S3 instance".
- Region:** A dropdown menu currently showing "Not Set". Below it is the description: "The region of this S3 connection. Optional."
- Access ID:** An empty text input field. Below it is the description: "The Access ID for the S3 account".
- Secret Key:** An empty text input field with a toggle icon on the right. Below it is the description: "The secret key for this S3 account".
- Bucket Name:** An empty text input field. Below it is the description: "The name of the bucket into which all files will be written. This bucket must already exist in S3."
- Fully Escape Names:** A checkbox that is currently unchecked. Below it is the description: "Whether all object names should be fully escaped".
- Use Object Locking:** A checkbox that is currently unchecked. Below it is the description: "Objects written to bucket will be locked (requires bucket with locking enabled)".
- Object Locking Retention Period (days):** A text input field containing "14". Below it is the description: "The retention period (in days) applied to objects written to the bucket".

A "Submit" button is located at the bottom right of the form.

This requires the following details to be configured.

Connection Name: The name of the connection as it will appear in the UI.

URL: The URL used to connect to this S3 instance.

Region: This is the region of the S3 connection. If this is the URL this value can be left as 'Not Set'.

Access ID: The Access ID for this S3 account.

Secret Key: The secret key for this S3 account.

Bucket Name: This is the name of the S3 'Bucket' into which all the files will be written. This bucket must already exist in the S3 system.

Fully Escape Names: Some storage systems require all object names to be fully escaped.

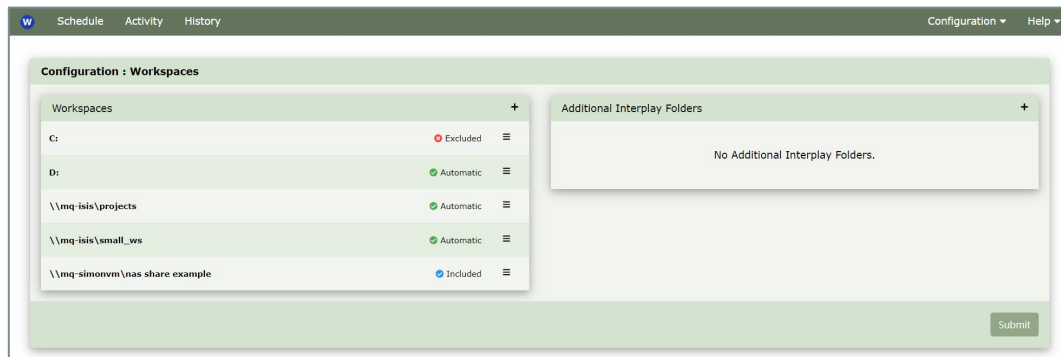
Use Object Locking: Objects written to bucket will be locked (requires bucket with locking enabled). Locking enabled buckets must not have a default retention period set.

Object Locking Retention Period (days): The retention period (in days) applied to objects written to the bucket.

4.4 WORKSPACES

This option will be shown in systems using the Workspace Backup option.

The Workspaces page of the Configuration is used to add workspace locations that cannot be detected automatically. These may be UNC paths for older Unity systems, or other general storage. This will add the workspaces to the list in the Home page. Any mounted storage that has an Avid MediaFiles folder in its root directory will normally be added to the list automatically.



Workspaces listed can be one of three categories, which the user can change:

- **Automatic:** Any mounted storage that has an Avid MediaFiles folder in its root directory will be added to the list automatically. These are refreshed every time the application starts. These will be included in any lists of workspaces.
- **Included:** For automatic or manually added workspaces, this workspace will be included in any list of workspaces.
- **Excluded:** For automatic or manually added workspaces, this workspace will be excluded in any list of workspaces.

Add new Workspace: Manually add a new workspace by specifying a UNC path.

Add new Additional Interplay Folder: Add the details of folders within a workspace that are used by Avid Interplay for indexed media files. These files will be full Avid media files but they are not contained within the standard Avid MediaFiles folder structure.

Once a setting is applied, Workspace Tools will look for the same folder on all workspaces.

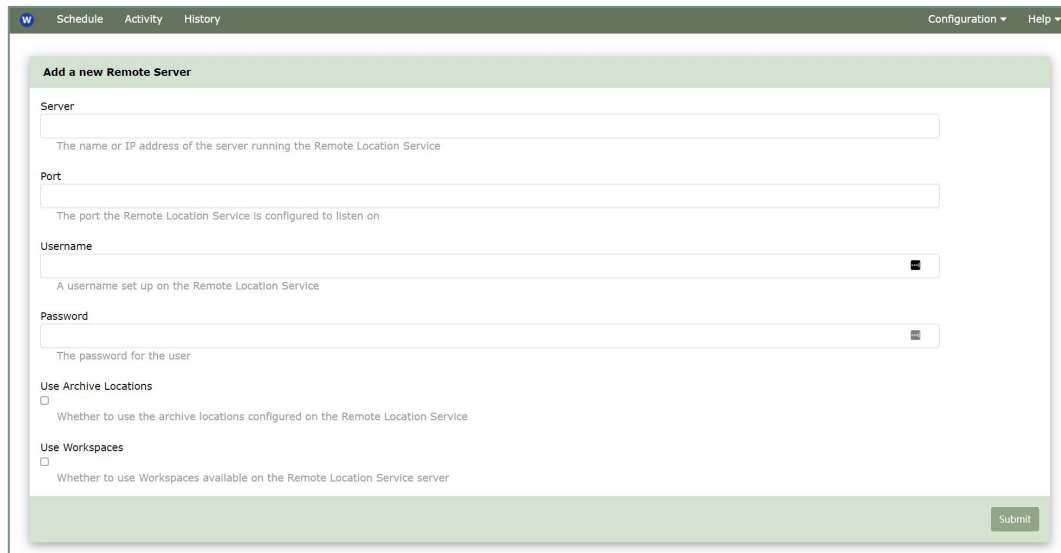
Submit: Pressing *Submit* will commit the changes to the system. Any changes must be submitted before the user navigates away from the page, otherwise the changes will not be applied.

4.5 REMOTE LOCATIONS

Workspace Tools can integrate with storage systems held in remote locations by using the Marquis Fotonflite remote location service option.

Workspace Tools will communicate to a Fotonflite Remote Server running in the other location and access storage systems configured in the remote location as if they were within the local network.

To configure this, first configure the connection to the remote server within [Configuration > Remote Server](#) and add a new Remote Server.



The screenshot shows a web-based configuration window titled "Add a new Remote Server". The window has a dark green header with navigation tabs: "w", "Schedule", "Activity", "History", "Configuration", and "Help". The main content area is white and contains the following fields and options:

- Server:** A text input field with the placeholder text "The name or IP address of the server running the Remote Location Service".
- Port:** A text input field with the placeholder text "The port the Remote Location Service is configured to listen on".
- Username:** A text input field with a small eye icon on the right and the placeholder text "A username set up on the Remote Location Service".
- Password:** A text input field with a small eye icon on the right and the placeholder text "The password for the user".
- Use Archive Locations:** A checkbox with the label "Use Archive Locations" and the description "Whether to use the archive locations configured on the Remote Location Service".
- Use Workspaces:** A checkbox with the label "Use Workspaces" and the description "Whether to use Workspaces available on the Remote Location Service server".

A green "Submit" button is located at the bottom right of the form.

This requires the following details to be configured.

Server Name: The IP Address or host Machine name for the remote service

Server Port: The port number configured in the remote location (Default 10000)

User Name: The user name configured in the remote service.

Password: The password for the above user

Use Archive Locations: Read the configured archive locations from the Remote Server. These can then be configured in the Archive Locations section of the configuration

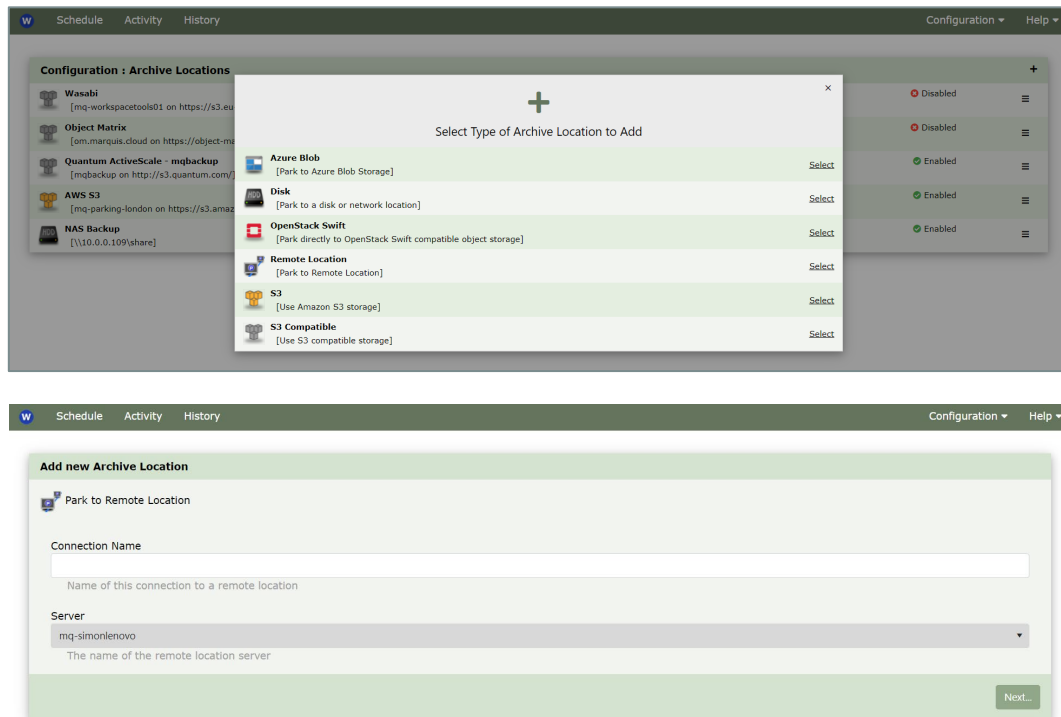
Use Workspaces: Show the currently mounted workspaces from the Remote Server

Once the credentials are confirmed the system will show the options available for the storage on the remote site. These will appear in an additional field called *Remote Location Type*.

4.5.1 ARCHIVE LOCATION FROM A REMOTE BACKUP TARGET

An archive location on a remote site can be added into Workspace Tools to use as the location for Workspace Backup jobs.

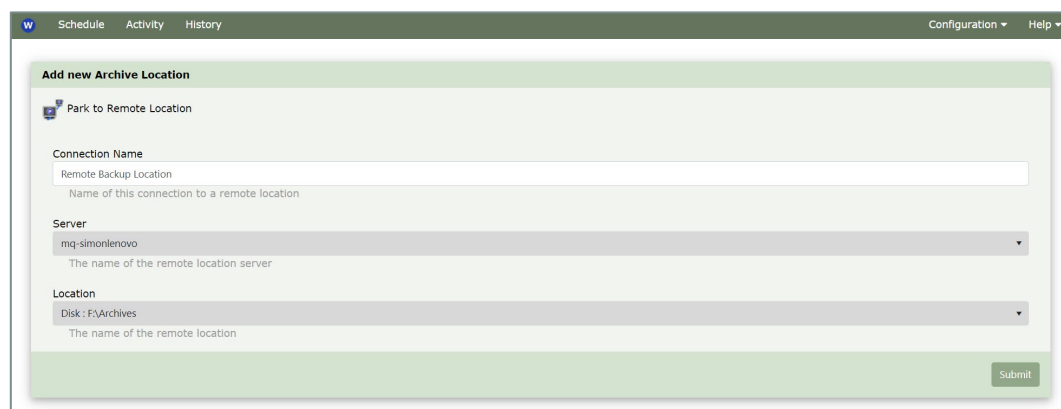
Within the *Configuration > Archive Locations* section, select the *Remote Location* option.



Connection Name: A descriptive name for the location to be displayed in the application

Server: A drop-down list of the currently configured Remote Location connections that have the Use Archive Locations option enabled

Press *Next...* to check the remote location and return a list of the currently configured archive locations. Choose your required location.



4.5.2 WORKSPACES FROM REMOTE LOCATIONS

Connections to remote workspaces are largely used within the Workspace Sync jobs.

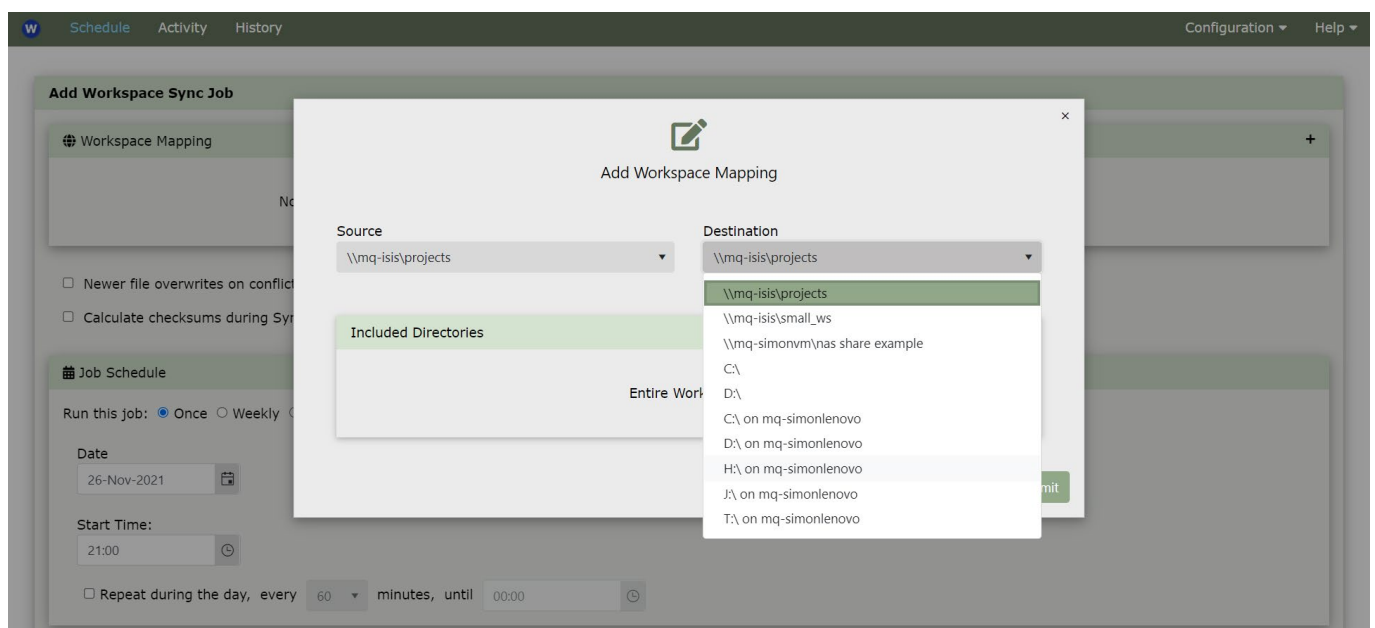
Once the remote server has been set up and the Use Workspaces option has been selected, any workspaces mounted on the remote server will be made available to the 'Client' Workspace Tools system.

No further configuration is required, the remote workspaces will be available for use within the Sync Job.

To set a remote workspace, add or edit a Workspace Sync Job.

The Source for the sync job will show the list of local workspaces.

The Destination will show a list of locally mounted workspaces as well as a list of the workspaces on the remote system. These will be displayed as the workspace path and the machine name for the Remote Location Server.



The job configuration can then be carried out in the same manner as for any local connection.

4.6 NOTIFICATIONS

Available in both Workspace Backup and Workspace Sync.

The Notification tab of the Configuration dialogue contains the settings required to link the application into an external SMTP mail server. Once configured, Workspace Tools will send updates on its action out to the configured email account.

The screenshot shows the 'Configuration : Notifications' dialog box. It features a title bar with a 'w' logo and menu items: 'Schedule', 'Activity', 'History', 'Configuration', and 'Help'. The main area is titled 'Configuration : Notifications' and contains the following elements:

- Enabled
- SMTP Server: Enter SMTP Server Name
- SMTP Port: 587
- User Name: Enter User Name
- Password: Enter Password
- From: Enter Sender Email Address
- To: Enter Recipient Email Address(es) separated with semicolons
- Subject Prefix: Enter Prefix for notification
- Send notifications : On Warnings or Errors (dropdown)
- Send notification of cancelled jobs.
- Test settings (button with envelope icon)
- Submit (button)

The following details are required for the SMTP connection: -

- SMTP Server
- Port
- Username and Password
- From: Sender email address
- To: Recipient email address

The following are general options: -

Subject Prefix: A prefix to the title of the mail to help for clear identification

Send Notifications: Choose when to send the notification messages from the drop down options:-

- Always
- On Warnings or Errors
- On Error

Option: Send on user cancel: If enabled Parking will send an email notification when a job is manually cancelled

Test settings (sends email): This button will send a test message through the currently configuration

4.7 HISTORY RETENTION

Available in both Workspace Backup and Workspace Sync.

The History Retention page of the Configuration allows the user to set how long to keep a historical record of the applications actions.



The options are:

Keep Forever: Keep a record of all events.

Keep to #n days: Limit the number of events held to include only the last "#n" days. e.g. only keep events from the previous 21 days.

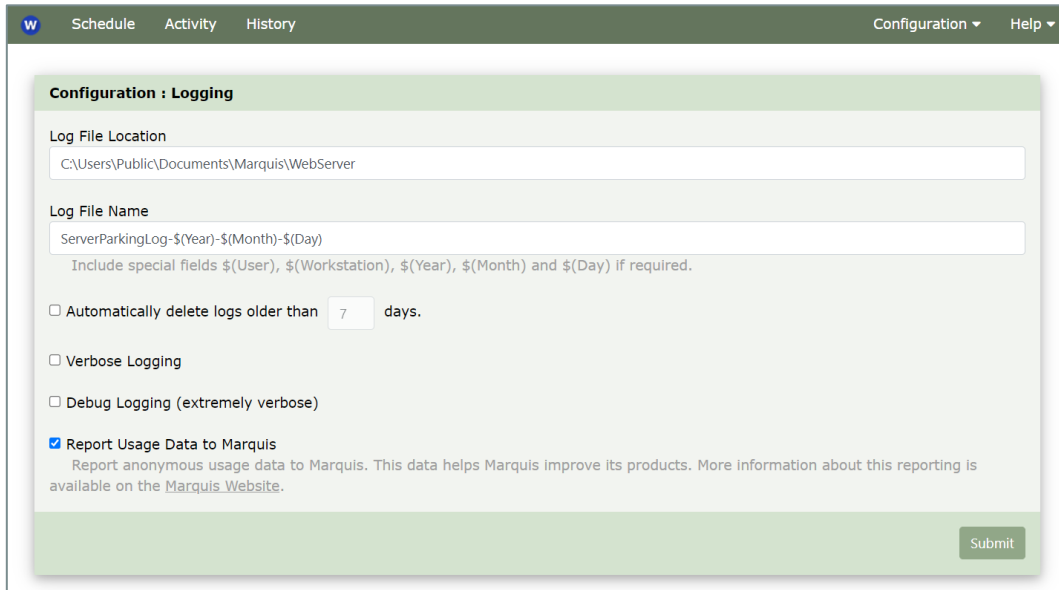
Keep for #n events: Limit the number of events held to the last "#n" number of events. e.g. only keep a record of the last 100 events.

Submit: Pressing *Submit* will commit the changes to the system. Any changes must be submitted before the user navigates away from the page, otherwise the changes will not be applied.

4.8 LOGGING

Available in both Workspace Backup and Workspace Sync.

The Logging section of the configuration allows the different logging levels to be set as well as the location and the name of the log files.



The screenshot displays the 'Configuration : Logging' section of a web application. At the top, there are navigation tabs: 'Schedule', 'Activity', 'History', 'Configuration', and 'Help'. The main content area is titled 'Configuration : Logging' and contains several settings:

- Log File Location:** A text input field containing the path 'C:\Users\Public\Documents\Marquis\WebServer'.
- Log File Name:** A text input field containing the pattern 'ServerParkingLog-\$(Year)-\$(Month)-\$(Day)'. Below this field is a note: 'Include special fields \$(User), \$(Workstation), \$(Year), \$(Month) and \$(Day) if required.'
- Automatically delete logs older than:** A checkbox is unchecked. To its right is a numeric input field with the value '7' and the text 'days'.
- Verbose Logging:** An unchecked checkbox.
- Debug Logging (extremely verbose):** An unchecked checkbox.
- Report Usage Data to Marquis:** A checked checkbox. Below it is a note: 'Report anonymous usage data to Marquis. This data helps Marquis improve its products. More information about this reporting is available on the [Marquis Website](#).'

A 'Submit' button is located at the bottom right of the configuration panel.

Log File Location: Set the location for the log file.

Log File Name: Set the naming convention for the log file. The default name can be altered if required. A sample of the options available is shown below the field.

Automatically Delete Logs: Set the application to delete log files after a certain number of days. This requires Year, Month and Day to be set in the field names. Enable the function with the check box and then enter the number of *Days to Keep*.

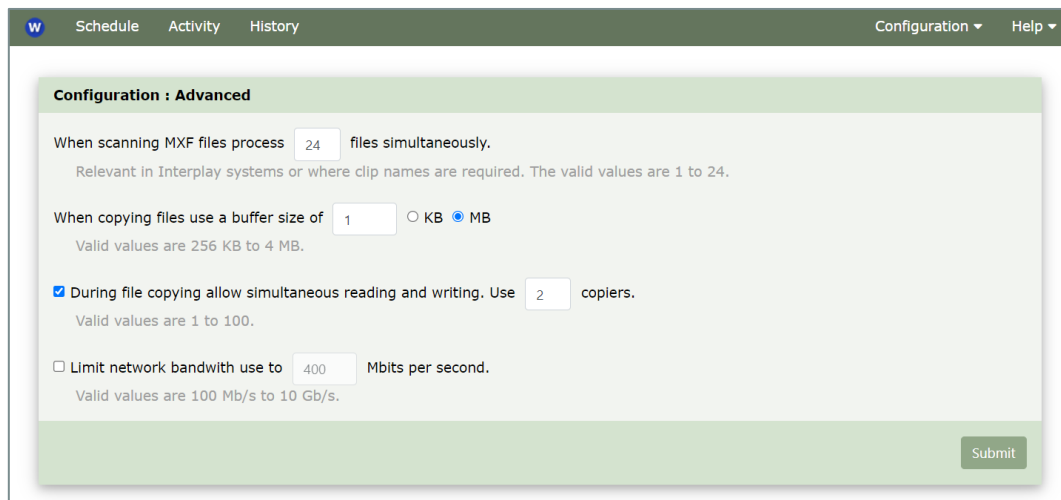
Verbose Logging: This adds considerably more information to the messages displayed in the Console and the log. As this will greatly increase the amount of messaging it should only be enabled when there is a specific need to understand more about processing.

Debug Logging: This adds an even greater level of logging detail and should not normally be set.

Submit: Pressing *Submit* will commit the changes to the system. Any changes must be submitted before the user navigates away from the page, otherwise the changes will not be applied.

Available in both Workspace Backup and Workspace Sync.

The Advanced section of the Configuration is used to control various settings which in normal circumstances need not be changed. You may be requested to change these by the Marquis Support team for example.



File Scans: Workspace Tools can scan several media files simultaneously during the analysis phase. This is a useful way of optimising the analysis and ensuring it takes the minimum time possible. It means that processing of one media file can be executed whilst Workspace Tools is waiting for file operations to be completed on the remote storage. The default setting is 24.

Under some circumstances you may get error messages in the Console which included the phrase 'semaphore timeout'. This may appear in error messages if there have been network related problems reading or writing to the Avid ISIS or Unity. We suggest that you change this value to 12 or even 6 to reduce the chance of this happening again.

Buffer Size: Manual setting for buffer size for read/write actions. The **Performance Tests Job** can be used to automatically check and update this setting.

Allow simultaneous read/write: Enabling this option will allow Workspace Tools to transfer multiple files at the same time. This option should be enabled before a **Performance Tests Job** is scheduled.

Maximum File Copies: Manual setting for the number of simultaneous read/write actions. The **Performance Tests Job** can be used to automatically check and update this setting.

Bandwidth Limit: This limits how much network bandwidth the system attempts to use when copying files. This can be used to either intentionally limit the bandwidth so the system does not impact other network traffic, or to overcome a problem. The lower the figure and the longer any copying will take.

Submit: Pressing *Submit* will commit the changes to the system. Any changes must be submitted before the user navigates away from the page, otherwise the changes will not be applied.

4.10 INACTIVE TIMES

Available in both Workspace Backup and Workspace Sync.

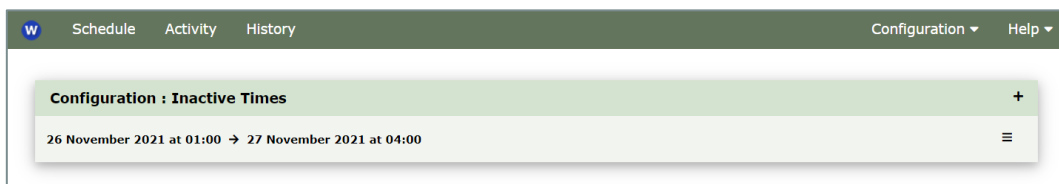
The Workspace Tools system can be set to have a comprehensive selection of Jobs scheduled in various repeat patterns.

If it is necessary for a customer to perform administrative or engineering work that could make the systems or some of their components unavailable they will have to stop the service to prevent jobs from starting.

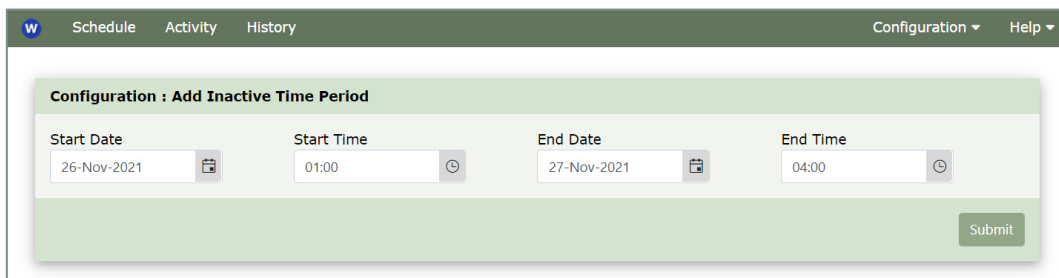
The **Inactive Times** feature allows the application to be configured to accept times when the system should automatically become inactive and not process any of the scheduled jobs.

The processing will then be automatically restarted once this period has passed.

To configure the Inactive Time, select **Inactive Times** to open the following:



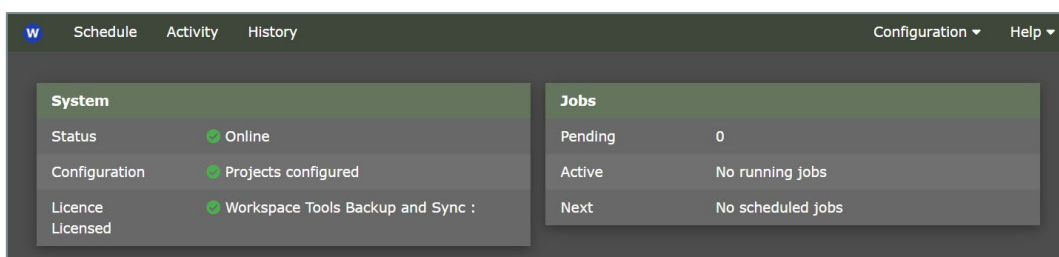
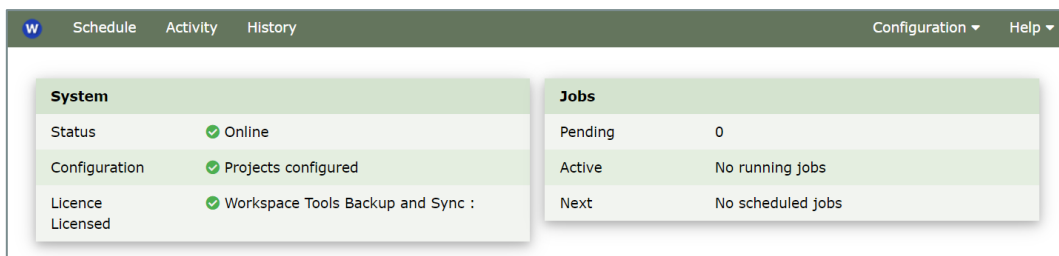
The inactive times can be configured by selecting **Add** or **Edit** to change an existing item.



Enter the start and end time and date for the inactive period. Multiple periods can be entered to build up a schedule of inactive periods.

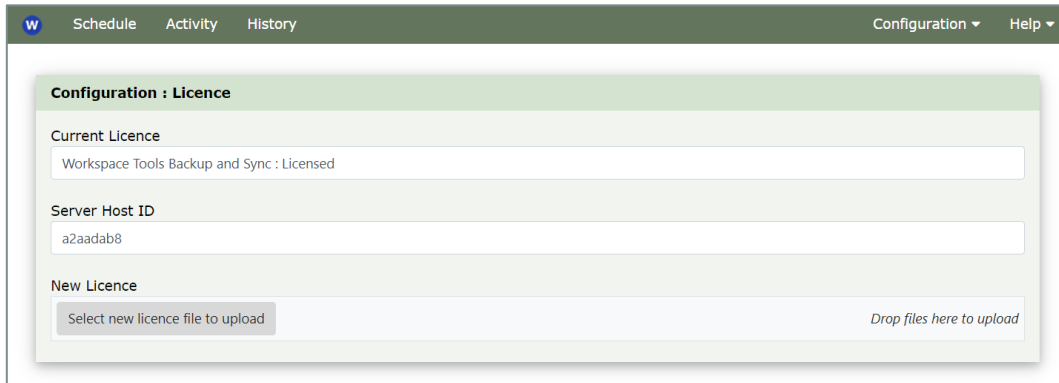
4.11 TOGGLE DARK MODE

Switch the UI between Light Mode and Dark Mode.



Available in both Workspace Backup and Workspace Sync.

The Licence section will show details of the current licence and allow licenses to be added and updated.



Current Licence: The shows the details of the licence currently loaded in the system.

Server Host ID: The Server Host ID is used by Marquis to create the licence. This ID should be included in any communication to Marquis regarding licencing.

New Licence: Press the Select new Licence file to upload button to open a file browser. Navigate to the new licence file and press open. The system will then load the licence file and update the information to confirm it has been applied successfully or give an error message to show any problems.

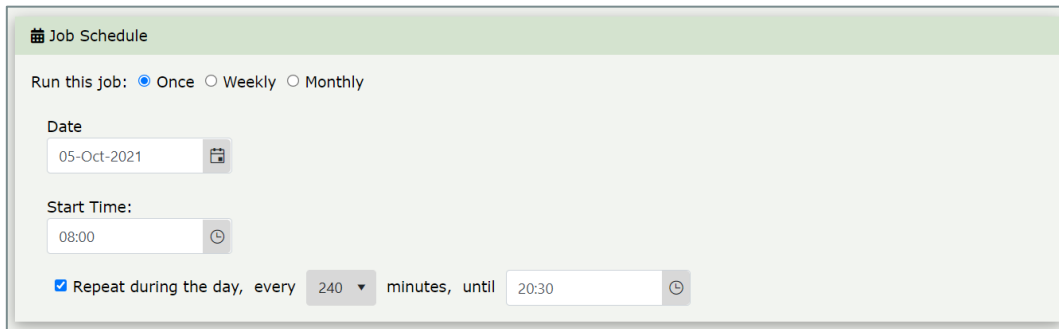
5 SCHEDULE PAGE

5.1 SCHEDULE TIMINGS

Each scheduled job can be configured to happen once, weekly or monthly.

5.1.1 ONCE

The job will be entered to happen only once. The user can enter the Date and the Time of Day for the job.



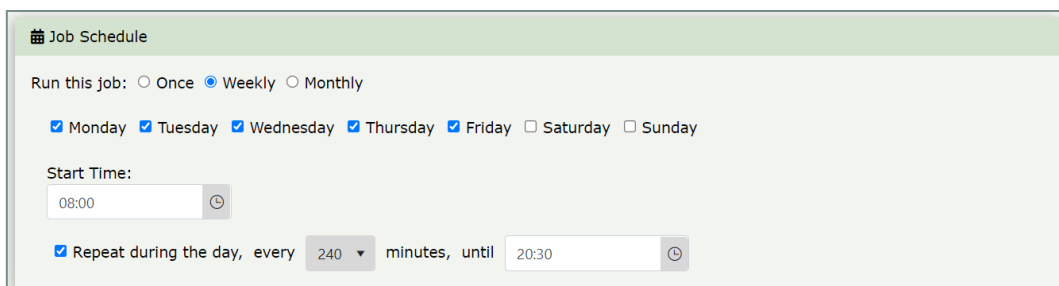
The screenshot shows the 'Job Schedule' configuration window. At the top, it says 'Run this job: Once Weekly Monthly'. Below this, there is a 'Date' field with the value '05-Oct-2021' and a calendar icon. The 'Start Time' field is set to '08:00' with a clock icon. At the bottom, there is a checkbox for 'Repeat during the day, every' which is checked, followed by a dropdown menu set to '240', the text 'minutes, until', and another dropdown menu set to '20:30' with a clock icon.

Further control on the timing is possible by allowing the archive to happen multiple times within this event between active times.

This extra control allows an option to repeat the archive for a set interval "Repeat every" between the configured Start and End times. In the above example, the job will be processed every 30 minutes between 9am and 6pm. This option is available for all schedule timing options.

5.1.2 WEEKLY

The job will be processed on a weekly basis and it can be set to happen on one or multiple days within the week. Each required day can be entered as well as the time of day. The same time of day will apply to each day.



The screenshot shows the 'Job Schedule' configuration window. At the top, it says 'Run this job: Once Weekly Monthly'. Below this, there are checkboxes for the days of the week: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday. Monday through Friday are checked, while Saturday and Sunday are not. The 'Start Time' field is set to '08:00' with a clock icon. At the bottom, there is a checkbox for 'Repeat during the day, every' which is checked, followed by a dropdown menu set to '240', the text 'minutes, until', and another dropdown menu set to '20:30' with a clock icon.

Again, you can select the job to repeat multiple times during the day until a specified time.

5.1.3 MONTHLY

The job will be scheduled to happen on either a particular day of the month or on a date described by a combination of a day and a statement. e.g. "Last" "Friday" of every month or the "First" "Friday" of every months.

The screenshot shows a 'Job Schedule' configuration window. At the top, there is a title bar with a calendar icon and the text 'Job Schedule'. Below this, the 'Run this job:' section has three radio buttons: 'Once', 'Weekly', and 'Monthly', with 'Monthly' selected. Under 'Monthly', there are two options: 'On day 1 every month' (selected) and 'On the First Monday of every month'. A 'Start Time:' field is set to '08:00'. At the bottom, a checkbox 'Repeat during the day, every 240 minutes, until 20:30' is checked.

Again, the time of day can be set as well.

Again, you can select the job to repeat multiple times during the day until a specified time.

5.2 BACKUP JOB

Workspace Backup will create, or update, a backup of one or more workspaces, associated projects and additional media. This option is only available with a licence that includes Workspace Backup, you can see this in the Licence section of the home page.

In the Schedule panel of the user interface, select the '+' button and choose *Workspace Backup* from the list.

A new page appears to configure the job.

The screenshot shows the 'Add Backup Job' configuration page. At the top, there are navigation tabs: 'W', 'Schedule', 'Activity', 'History', 'Configuration', and 'Help'. The main content area is titled 'Add Backup Job' and is divided into several sections:

- Excluded Workspaces:** A list of workspaces with 'Include' buttons next to them. The list includes: '\\mq-isis\projects', '\\mq-isis\small_ws', '\\mq-simonvm\nas share example', 'C:\', and 'D:\'.
- Included Workspaces:** A section that is currently empty, displaying 'No workspaces.'.
- Exclusions:** A section that is currently empty, displaying 'No exclusions.'.
- Destination:** A dropdown menu showing 'Quantum ActiveScale - mqbackup'.
- Job Schedule:** A section for scheduling the job. It includes options for 'Run this job:' (Once, Weekly, Monthly), a 'Date' field (26-Nov-2021), a 'Start Time' field (21:00), and a checkbox for 'Repeat during the day, every 60 minutes, until 00:00'.

A 'Submit' button is located at the bottom right of the configuration area.

Workspaces: At the top is a list of available workspaces in the left-hand panel and those to be included in the backup on the right.

For each workspace that you want to be included in the backup, click the *Include* button next to the workspace name. This will move the workspace from the *Excluded Workspaces* to the *Included Workspace* list. Press the *Exclude* button if you want to remove it.

If workspaces that you want to backup are not listed, this may indicate that the current user does not have permission to see them, or that they need to be added in the [Configuration > Workspaces](#).

Take media from Included Workspaces only: This option will restrict the project referenced media files that will be backed up by the job. Only media found on workspaces included in the job will be used in the backup. Any media files referenced by a project that reside on any other workspaces will not be backed up. This allows the contents of the backup to be tightly controlled.

Include AMA files from projects: This option allows the user to decide whether a backup job should include AMA media referenced within Avid projects.

The default behaviour will be set as entered in the [Configuration > General setting](#).

Destination: The destination for the Backup Job is set by choosing the required location from the drop down list. The list of destinations is set within the [Configuration > Archive Locations](#) section of the configuration.

The location for the backup is set for each of the backup jobs allowing the user to choose whether the jobs are sent to a shared backup location, a unique location for each backup or a combination of the two.

This is especially useful for systems where the workspaces may relate to different master projects or even different end customers.

- Sending all jobs to a single backup location ensures that all of the content from the source locations are included in the same backup and Workspace Tools can work to ensure there is no unnecessary duplication
- Sending jobs to different backup locations allows each job to have its own unique backup
- A combination of the two can be used within the schedule.

Exclusion List: This feature allows Workspace Backup jobs to have a set of optional exclusions applied to their configuration, allowing users to choose to instruct Workspace Tools not to backup certain content.

The rules on what to exclude can be set to include one or more of the following:

- **Directory Name:** Exclude a named folder wherever it is seen in the source structure e.g. "Creating"
- **Directory Path:** Exclude the content of a specific folder path
- **File Pattern:** Exclude files that match a certain file pattern e.g. "*.jpg"

Fill in the details of the exception and select **Submit**.

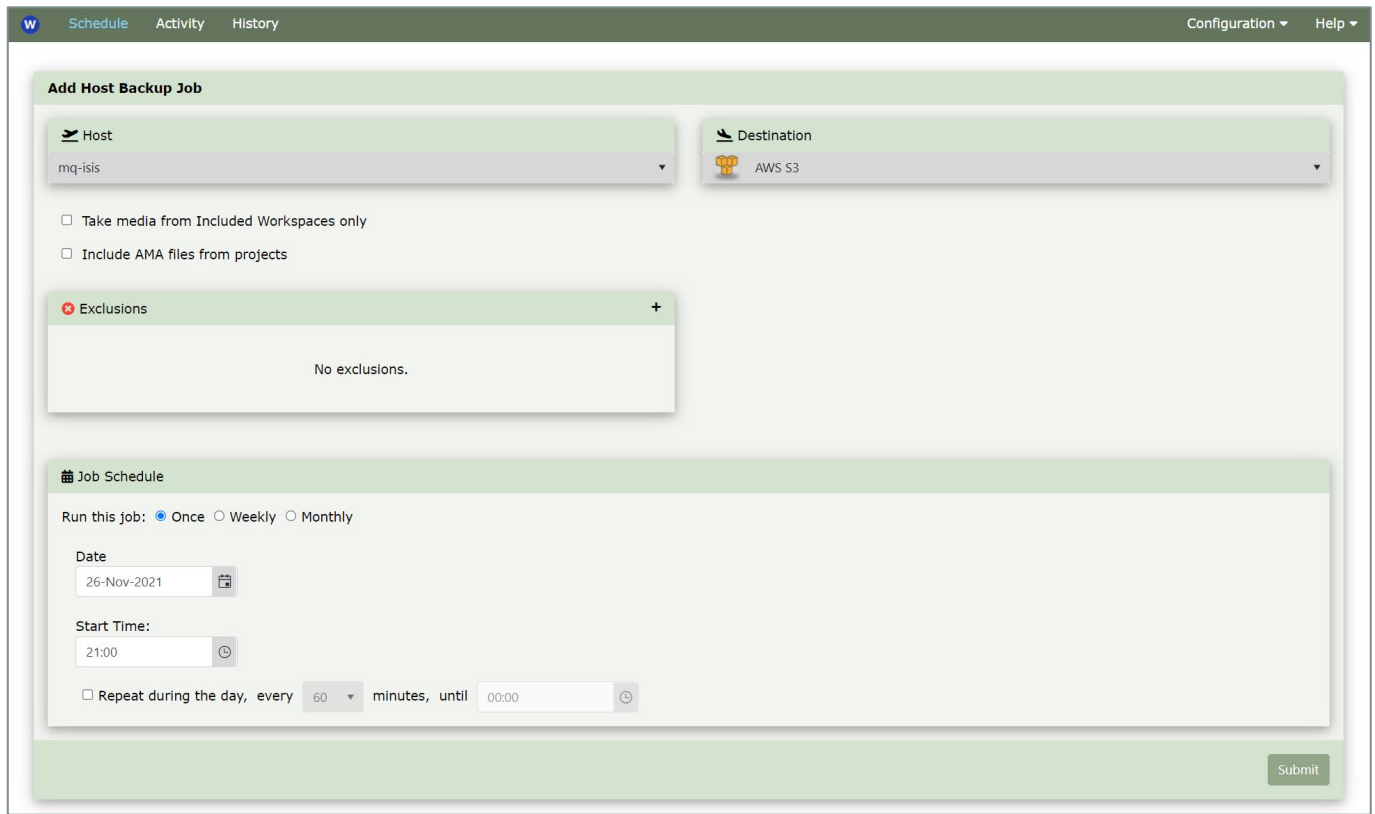
Multiple entries can be built up into the processing rules for the particular job.

Schedule: Select when and how frequently the backup should happen, see: [Schedule Timings](#).

5.3 HOST BACKUP JOB

A Host Backup job will create, or update, a backup of all workspaces on a specific Avid Host, associated projects, and additional media.

In the Schedule panel of the user interface, select the '+' button and choose *Host Backup* from the list.



Host: At the top of the page is a list of available Hosts. In most Avid environments, there will be a single Host, e.g. AvidNEXIS.

When the job is run, Workspace Tools will search for all workspaces mounted on the specified Avid Host. This is a convenient way of backing up all workspaces without having to modify the configuration of the job each time a workspace is added or removed from the environment.

Destination: The destination for the Backup Job is set by choosing the required location from the drop down list. The list of destinations is set within the Archive Locations section of the configuration.

The location for the backup is set for each backup job, allowing the user to choose whether the jobs are sent to a shared backup location, a unique location for each backup or a combination of the two. This is especially useful for systems where the workspaces may relate to different master projects or even different end customers.

- Sending all jobs to a single backup location ensures that all of the content from the source locations are included in the same backup and Workspace Tools can work to ensure there is no unnecessary duplication.
- Sending jobs to different backup locations allows each job to have its own unique backup.
- A combination of the two can be used within the schedule.

Take media from Included Workspaces only: This option will restrict the project referenced media files that will be backed up by the job. Only media found on workspaces included in the job will be used in the backup. Any media files referenced by a project that reside on any other workspaces will not be backed up. This allows the contents of the backup to be tightly controlled.

Include AMA files from projects: This option allows the user to decide whether a backup job should include AMA media referenced within Avid projects. The default behaviour will be set as entered in the General section of the configuration.

Exclusion List: This feature allows Workspace Backup jobs to have a set of optional exclusions applied to their configuration, allowing users to choose to instruct Workspace Tools not to backup certain content.

The rules on what to exclude can be set to include one or more of the following:

- Workspace Name: Exclude a specific workspace from the backup. This allows temporary or non-critical workspaces to be omitted from the backup e.g. [ITEMP].
- Directory Name: Exclude a named folder wherever it is seen in the source structure e.g. [Creating].
- Directory Path: Exclude the content of a specific folder path.
- File Pattern: Exclude files that match a certain file pattern e.g. [*].jpgl.

Press the Add button on the exclusions panel to add a new exclusion. Press the Menu button on each exclusion to edit or delete an exclusion.

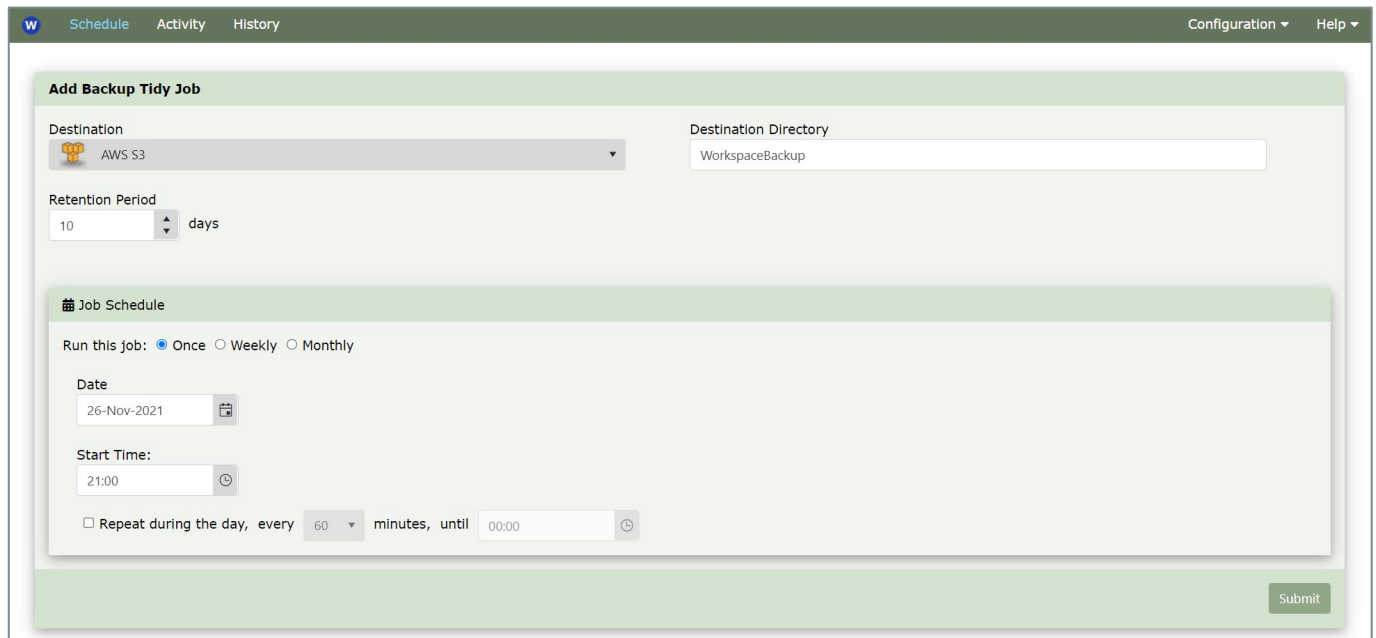
Multiple entries can be built up into the processing rules for the particular job.

Schedule: Select when and how frequently the backup should happen, see: [*Schedule Timings*](#).

5.4 TIDY JOB

Tidy will delete files from a backup which have been removed from the source workspace longer ago than the specified retention period. This option is only available with a licence that includes Workspace Backup, you can see this in the Licence section of the home page.

In the Schedule panel of the user interface, select the '+' button and choose *Workspace Tidy* from the list.



The screenshot shows the 'Add Backup Tidy Job' configuration form. At the top, there are navigation tabs: 'Schedule', 'Activity', and 'History'. On the right, there are links for 'Configuration' and 'Help'. The form is titled 'Add Backup Tidy Job' and contains the following fields and options:

- Destination:** A dropdown menu showing 'AWS S3'.
- Destination Directory:** A text input field containing 'WorkspaceBackup'.
- Retention Period:** A numeric input field with '10' and a 'days' unit selector.
- Job Schedule:** A section with radio buttons for 'Run this job: Once (selected), Weekly, Monthly'.
- Date:** A date input field showing '26-Nov-2021' with a calendar icon.
- Start Time:** A time input field showing '21:00' with a clock icon.
- Repeat during the day:** A checkbox (unchecked) followed by a dropdown menu showing '60', the text 'minutes, until', and another time input field showing '00:00' with a clock icon.
- Submit:** A green button at the bottom right.

When the Tidy Job detects that a file has been deleted from the source it will activate the retention period. Each time the Tidy Job runs it will re-check the source files and compare them to the retention period. Once the retention period has been passed the files will be removed from the backup.

Media files will only be deleted when all the projects which reference them have finally been deleted from the workspace and the retention period has passed.

Destination: Each Tidy Job will be set to process a particular backup destination. Choose which backup destination to process from the drop-down list.

Destination Directory: Set the directory within the backup that will be tidied. This will default to '*WorkspaceBackup*'. It should only be changed when the Tidy job is used for a Project Backup. The Project Backup allows different destination directories to be set and the option here allows the Tidy Job to support this flexibility.

Select when and how frequently the tidy should happen, see: [Schedule Timings](#).

The frequency of the tidy job and the length of the retention period help to control the size of the backup. If the backup grows too large you may want to consider reducing the retention period. See '[Estimating the size of the backup](#)'.

For instances when the system is working with multiple backup locations a tidy job can be created for each of the backups and each tidy job can have its own retention policy.

Schedule: Select when and how frequently the backup should happen, see: [Schedule Timings](#).

5.5 PROJECT BACKUP JOB

A Project Backup job will create or update a backup of Media Composer project files that will not take any media files.

This creates a versioned backup from which the user can restore projects or bins from projects using the Project Restore application provided with Workspace Tools.

In the Schedule panel of the user interface, select the '+' button and choose *Project Backup* from the list.

The screenshot shows the 'Add Project Backup Job' configuration window. At the top, there are navigation tabs: 'w Schedule', 'Activity', and 'History'. On the right, there are 'Configuration' and 'Help' dropdown menus. The main content area is titled 'Add Project Backup Job' and contains several sections:

- Source Projects:** A dropdown menu currently set to 'Root'.
- Backup Location:** A dropdown menu showing 'Quantum ActiveScale - mqbackup'.
- Backup Name:** A text input field containing 'ProjectBackup'.
- Job Schedule:** A section with a calendar icon and the following options:
 - Run this job: Once, Weekly, Monthly
 - Date: A date picker set to '26-Nov-2021'.
 - Start Time: A time picker set to '21:00'.
 - Repeat during the day, every minutes, until .

A 'Submit' button is located at the bottom right of the configuration area.

Source Projects: This setting will instruct the job which set of Projects to use for the job. The drop-down list will show the locations that are set within the *Configuration : Project Locations* setting.

Backup Location: This setting will allow the choice of location for the backup to be created. This drop-down list will show the contents of locations that are set within the *Configuration : Archive Locations*.

Backup Name: This name will be given to the folder that will be created within the location. This allows multiple Project Backups to be sent to the same Backup Location. The name entered here will be used within the *Tidy Job* as the *Destination Directory*.

Schedule: Select when and how frequently the backup should happen, see: [Schedule Timings](#).

5.6 WORKSPACE SYNC JOB

Workspace Sync will synchronise one or more source workspaces with a matching number of destination workspaces. This option is only available with a licence that includes Workspace Sync, you can see this in the Licence section of the home page.

Each job can synchronise one or more pairs of workspaces.

- Having each job synchronise a single workspace will allow for a finer control of the scheduling of the jobs and will allow (for example) some workspaces to be synchronised more often than others.
- Alternatively, having each job synchronise multiple workspaces allows for a more efficient synchronisation to be performed, allowing the deltas on the second workspace to be analysed while the file-copying for the first workspace is taking place.

In the Schedule panel of the user interface, select the '+' button and choose *Workspace Sync* from the list.

A new page will appear that will allow the details of the job to be configured.

The screenshot shows the 'Add Workspace Sync Job' configuration page. At the top, there are navigation tabs: 'w', 'Schedule', 'Activity', 'History', 'Configuration', and 'Help'. The main content area is divided into several sections:

- Workspace Mapping:** A section with a '+' icon and the text 'No workspace mappings.'
- Exclusions:** A section with a '+' icon and the text 'No exclusions.'
- Options:** Three checkboxes:
 - Newer file overwrites on conflict
 - Calculate checksums during Sync
 - No deletions from destination workspaces.
If this option is checked, the user must manage deletions themselves to ensure sufficient space.
- Job Schedule:** A section with the following controls:
 - Run this job: Once Weekly Monthly
 - Date: 19-Jan-2022 (with a calendar icon)
 - Start Time: 21:00 (with a clock icon)
 - Repeat during the day, every 60 minutes, until 00:00 (with a clock icon)
- Submit:** A green button at the bottom right.

Workspaces Mapping

The first section "Workspaces Mapping" allows the source and destination for the synchronisation to be set.

The available workspaces will be presented as a drop-down list including the locally mounted and configured workspaces and any remote workspaces from a Fotonflite remote service which has been configured in the [Configuration – Remote Servers section](#).

Selecting "+" opens the following window.

Source: The source location. This is entered from the drop-down list.

Destination: The destination location. This is chosen from the drop-down list.

Including the Entire Workspace in the Job: The initial workspace mapping will include all the contents of a workspace by default. The details in the "Included Directories" section will show that the job will include the "Entire Workspace".

In many cases, this will be the only configuration required in this section of the job.

Including Only Specific Directories in the Job: If the job requires a more restricted set of content to be synchronised the user can set individual folders within the source workspace. Each source mapping can have its own directory level configuration set.

Included Directories: The Sync Job allows certain sub-directories to be specifically included in the processing. Setting directories to be included will by default exclude other directories within the source.

Press the "**Submit**" button to accept the entry.

Once entered, the details for the destination can be changed by selecting the edit button in the "Workspace Mapping" section.

Exclusions

This feature allows Workspace Sync jobs to have a set of optional exclusions applied to their configuration, allowing users to choose to instruct Workspace Tools not to backup certain content.

The rules on what to exclude can be set to include one or more of the following:

- **Directory Name:** Exclude a named folder wherever it is seen in the source structure e.g. "Creating"
- **Directory Path:** Exclude the content of a specific folder path
- **File Pattern:** Exclude files that match a certain file pattern e.g. "**.jpg"

Setting directories to be excluded will remove these from the processing whenever they are found on the source workspace. Examples of these are the "Creating" and "Quarantine" folders that are frequently created within Avid systems and are unlikely to be required on the destination workspace.

Newer file overwrites on conflict: This tick box details the behaviour of the job when a file has been changed on the source workspace and still exists on the destination.

If enabled. The job will detect that there is a newer version exists on the source and will replace the file on the destination

If disabled. The job will detect that there is a newer version on the source but will not replace the file on the destination. It will add details of the conflict into the job's log.

Calculate checksums during Sync: With this option selected checksums will be calculated on all transfers, including transfers to Fotonflite connected remote locations.

No deletion from destination workspace: When this is enabled the Sync Job becomes a 'Push' process that will send content added in the source to the destination but will never remove anything from the destination.

This is useful for customer who are using the job to distribute content to a secondary system and want that system to run independently. The receiving system will have all the content pushed from the source but will be able to choose how they want to use and manage the content without the risk that their copy of the content will be removed when the source system makes changes.

The secondary site will need to manage the deletion of content from the workspace to ensure there is enough space for any new content from the source system.

More details on the processing of the job can be found in the section '[Synchronisation Processing](#)'.

Schedule: Select when and how frequently the backup should happen, see: [Schedule Timings](#).

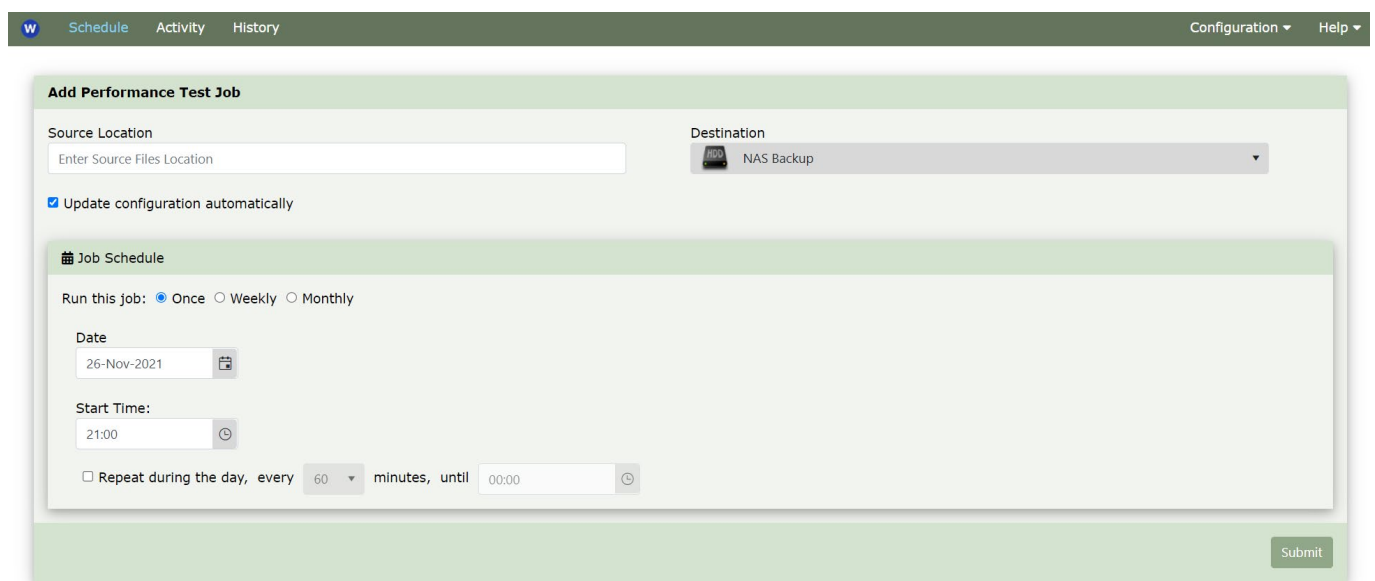
5.7 PERFORMANCE TEST JOB

Workspace Tools includes a performance testing tool, which will test various combinations of buffer size and simultaneous read/writes and report on the performance found. It can automatically set the best combination within the configuration. These Performance Tests are processed as Scheduled Jobs.

To use the test, we suggest creating a folder on the Source Device (i.e. Avid) that contains a mixture of files of differing sizes. In our tests we often combine a number of video and audio Avid MXF OpAtom files with some project and bin files. We would recommend having approximately 200-300 files. The test will use these sample files and perform a test transfer to a configured destination device.

During this test, both the size of the buffer used and the number of simultaneous file copies (if simultaneous Read/Write is enabled in the advanced configuration) will be altered and the performance monitored.

To create the test job, select *Performance Test* from within the Scheduling job list, this will open the following page.



Source Location: The location of the sample media files.

Destination: The archive location to be used. This refers to a location configured in Workspace Tools as an *Archive Location*.

Automatically update the configuration with best copy parameters: If checked, the application will take the best performance figures and automatically update its configuration with the relevant settings.

Schedule: Standard Workspace Tools scheduling controls apply to allow the test jobs to be scheduled to run at a clearly defined time or times.

Select *Submit* to accept the settings entered.

5.7.1.1 RUNNING THE TEST

The test will either run at the configured scheduled time or can be instructed to run immediately by selecting *Run Now* from the menu options for the scheduled job.

Once started the progress of the Test can be seen in the Activity tab. When it has completed, the job will show the best result it has found during the test.

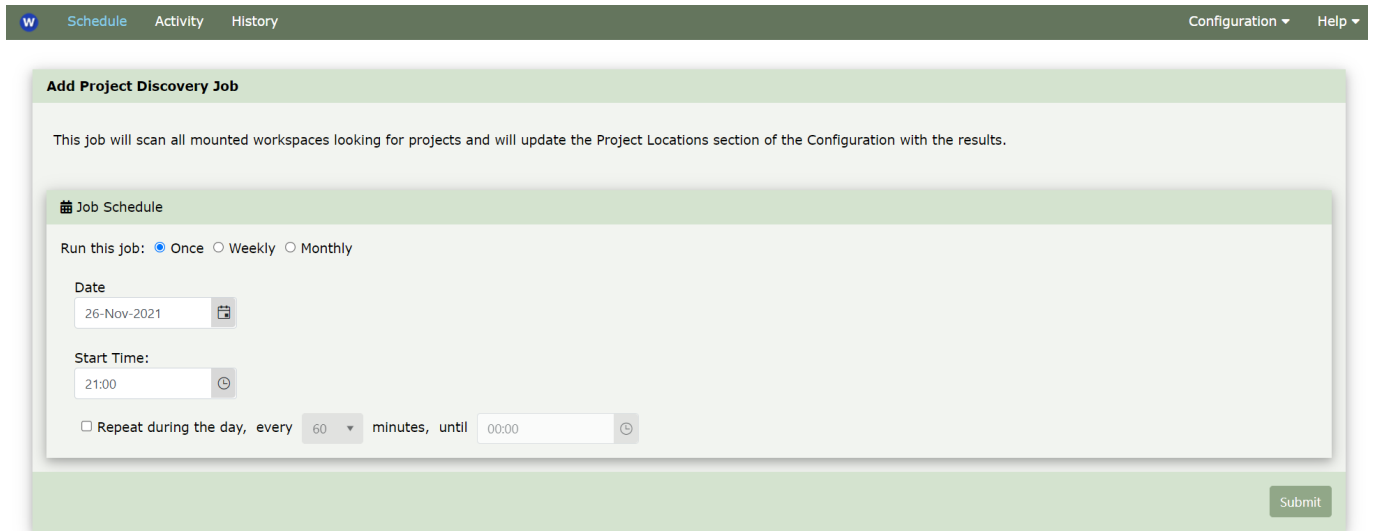
This also shows the summary list of the performance tests, and the results for differing buffer sizes and multiple file copies.

If the option had been selected, the best setting will be used to automatically update the Configuration.

5.8 PROJECT DISCOVERY JOB

Project Discovery will automatically search for project locations on all mounted file systems and add them to the Project Location configuration.

This is useful when first configuring Workspace Tools, especially if projects are distributed across many workspaces. It might also be useful to run it at regular intervals if the location of projects tends to change.



The screenshot shows a web interface for configuring a Project Discovery Job. At the top, there is a navigation bar with 'w' logo, 'Schedule', 'Activity', 'History', 'Configuration', and 'Help'. The main content area is titled 'Add Project Discovery Job' and contains the following elements:

- A descriptive text: 'This job will scan all mounted workspaces looking for projects and will update the Project Locations section of the Configuration with the results.'
- A section titled 'Job Schedule' with a calendar icon.
- 'Run this job:' with radio buttons for 'Once' (selected), 'Weekly', and 'Monthly'.
- 'Date:' with a text input '26-Nov-2021' and a calendar icon.
- 'Start Time:' with a text input '21:00' and a clock icon.
- 'Repeat during the day, every' with a dropdown menu set to '60', the text 'minutes, until', and a text input '00:00' with a clock icon.
- A 'Submit' button in the bottom right corner.

Having run this job, you should return to the Project Location configuration to check the locations and remove any that are not needed.

Marquis provide two solutions for what to do when a disaster hits. You may want to use either one or both simultaneously.

To recover your most critical project or even just its bin, use Project Restore (included in the installer). As an example, you could install this on a number of laptops that have Media Composer on them and have editors restore the most critical projects to them.

To recover your entire workspace, which will of course take a lot longer, use the provided Workspace Restore application, also included in the installer.

Restoring a Workspace

Workspace Tools installer includes a copy of the Marquis Workspace Restore application and associated licence. This licence allows Workspace Restore to be installed on any machine, any number of times, but only to restore workspaces.

Details on the installation and use of Workspace Restore can be found within the documentation provided within the application.

Restoring a Project or Bin

Workspace Tools installer includes a copy of the Marquis Project Restore application and associated licence. This licence allows Project Restore to be installed on any machine, any number of times, but only to restore projects or bins.

This version of Project Restore will allow the user to restore projects from a completed Backup. The destination for this restore could be any Avid based system, including both shared storage systems and standalone editors.

Project Restore can be used with the workspace backup by configuring the "Archive Location" within the application to be the location of the Workspace Backup.

The Backup is created in a format that allows Project Restore to see it as a standard set of archives.

Details on the installation and use of Project Restore can be found within the documentation provided within the application.

7 THE STRUCTURE OF A BACKUP

When Workspace Tools creates a backup, it will structure the backup around four logical groupings within the parent folder "WorkspaceBackup".

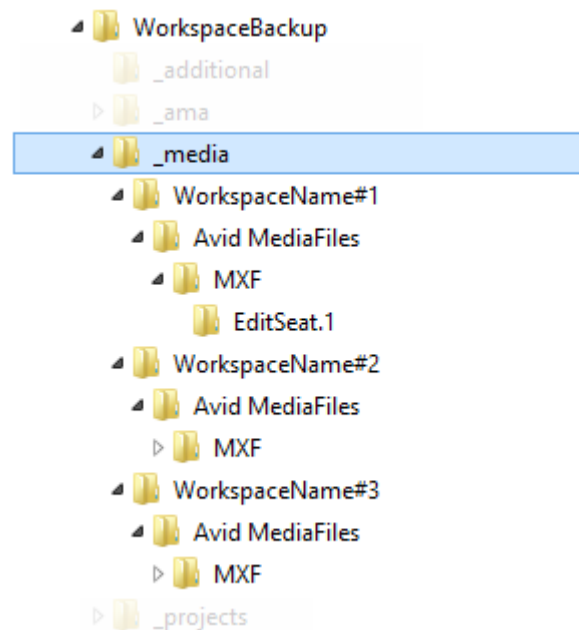
- _media
- _projects
- _ama
- _additional

Media

The media grouping will contain all of the Avid Media Files for each of the workspaces that have been backed up. These are the media items that are held within the Avid managed folders within the primary Avid storage (e.g. /WorkspaceName/Avid MediaFiles/MXF/...).

The contents of the *Media* folder are subdivided into sections for each of the workspaces on the source system. Workspace Tools will then copy all the media in the same folder structure that it was stored in on the original workspace.

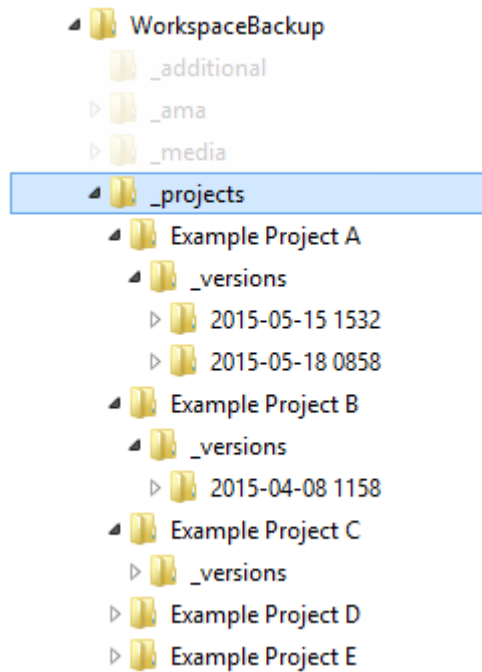
The structure of the *Media* Folder will appear as shown:



Projects

Workspace Tools will also backup any Avid Projects that it detects are referencing any of the media that it has found on the source workspace. Once the application has identified a Project it will create a snapshot of the project files and save this to the backup as a 'version'. Each time Workspace Tools runs a backup job it will create a new snapshot version of each Project.

Each version will be identified by the date and time the snapshot was taken.



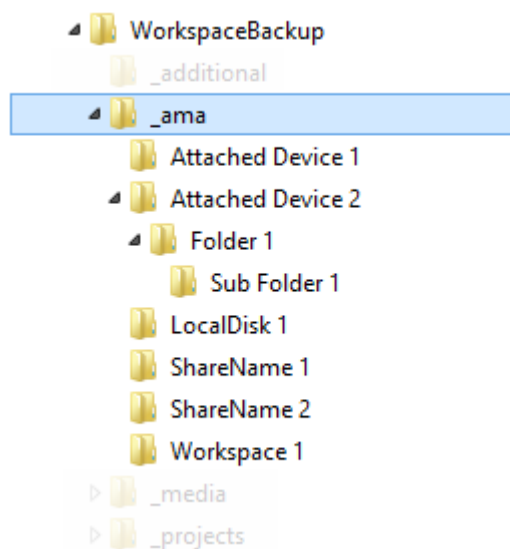
Workspace Tools will interrogate the project files and identify if they are using any media files from another workspace. Any media files identified will be copied into the backup and stored within the Media folder for the relevant workspace.

AMA

As Workspace Tools investigates the Project Files it will identify any material linked to the Project via AMA and copy that into the Backup.

A separate folder within the Backup is created for the AMA linked media named _ama. When Workspace Tools copies the AMA material into the Backup it will create a folder structure that matches the structure from the source content. e.g. ShareName\Folder1\Folder2\Folder3\Content. Where the ShareName could be the name of a local drive, an attached drive, a network location or an Avid Workspace.

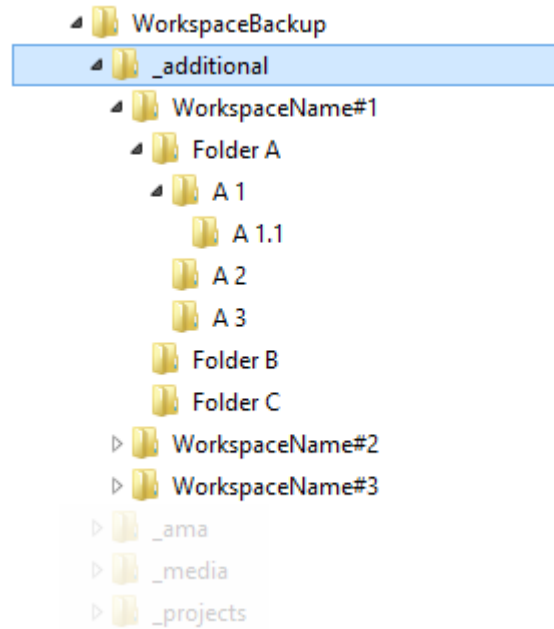
Workspace Tools will create a suitable folder structure for all of the AMA assets.



Additional

The final folder within the Backup is named "_additional" and it will hold all of the content found on the source workspace that is not held within the Avid managed media files folders.

It contains sub folders for each of the workspaces included within the backup. During the backup process, the content from the workspace is copied into the backup and placed within a folder structure that matches the structure from the source workspace.



8 ESTIMATING THE SIZE OF THE BACKUP

Calculating the size of your Workspace Tools backup

The size that your Workspace Tools backup will grow to is dependent upon several factors. It may be that it is difficult to estimate these factors, but at the same time it may be important to estimate the size of the storage used before installation.

Here is a brief summary of the factors that will influence the size the backup grows to.

PARAMETERS

Backup Run: This could be hourly, daily, weekly or monthly, or some combination. We estimate the size of the backup based upon a number of 'Backup Runs'. You decide whether this means days or weeks.

Media Files: The number of media files on the ISIS when the first Backup Run is executed.

Av. Size of Media: The average size in Megabytes of the media files

Media Churn: The percentage of media files deleted and added per Backup Run. For example if you have 100TB media stored and you tend to delete 5TB and add 5TB of new media between each cycle of your Backup Run this value will be 5%.

Projects: The number of projects stored on your primary storage.

Av. Size of Projects: The average size of each your projects. This is the total size of all the project files and folders below the primary project folder.

Retention Period: This is the length of time that you retain media and projects in the backup after they have been deleted from the primary storage. This value is in the number of cycles of Backup Runs. For example if your Backup Runs happen daily and the retention period is 30 days, this value would be 30. Alternatively if your Backup Runs happen weekly and the retention period is 90 days, this value would be 13.

CALCULATION

Starting size of media files (GB) = Media Files * Av. Size of Media Files / 1,000

Size of media files added each Backup Run (GB) = Starting size of media files (GB) * Media Churn

Size of media files at end of Retention Period (GB) = Starting size of media files (GB) + Size of media files added each Backup Run (GB) * Retention Period

Size of project files added each Backup Run (GB) = Projects * Av. Size of Projects / 1,000

Size of project files at end of Retention Period (GB) = Size of project files added each Backup Run (GB) * Retention Period

Size of backup at end of Retention Period (GB) = Size of media files at end of Retention Period (GB) + Size of project files at end of Retention Period (GB)

Parameters		
	Media Files:	100,000
	Av. Size of Media:	50
	Media Churn:	2%
	Projects:	1,000
	Av. Size of Projects:	5
	Retention Period:	30
Calculation		
	Starting size of media files (GB)	5,000
	Size of media files added each Backup Run (GB)	100
	Size of media files at end of Retention Period (GB)	8,000
	Size of project files added each Backup Run (GB)	5
	Size of project files at end of Retention Period (GB)	150
	Size of backup at end of Retention Period (GB)	8,150

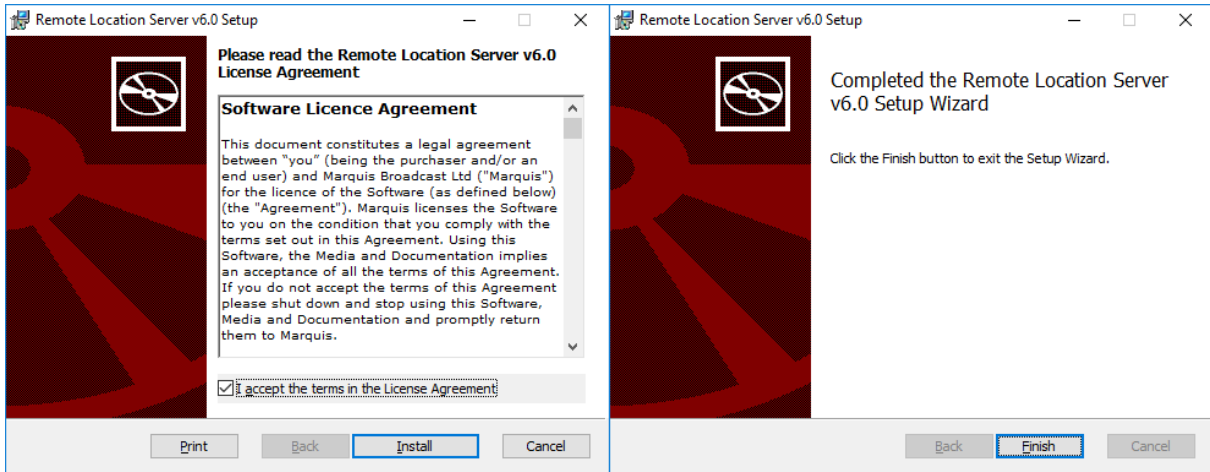
9 FOTONFLITE REMOTE SERVER SETUP

9.1 FOTONFLITE REMOTE SERVER INSTALLATION

Run the installer application: -

RemoteLocationServer.msi

The installer will launch, and the only user interaction required is the confirmation of the Software Licence Agreement.

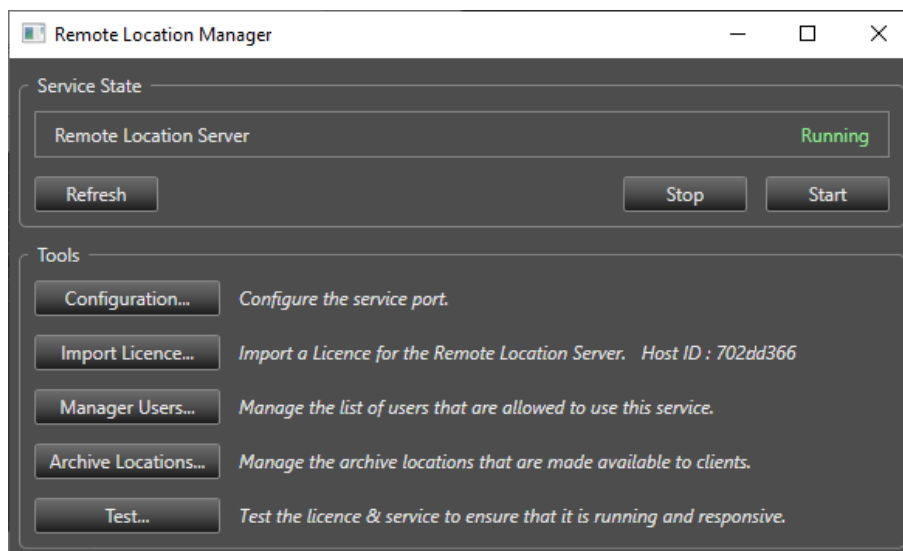


Once complete this will have added the *Remote Location Server Manager* application to the machine and a *Marquis Remote Location Service* to the systems services.

9.2 CONFIGURATION

The service is automatically started after the installation.

The first time it is used some configuration options will need to be carried out. Open the *Remote Location Server Manager* application to handle the configuration.



9.2.1 LICENSING

When the system is first opened it will need to be licenced to run on the installed machine.

The licensing is controlled based on a Host ID of the local machine. The HostID is shown in the configuration client alongside the *Import Licence...* option. In the example above the Host ID is *702dd366*.

The licence file should be mailed to licence@marquisbroadcast.com.

Marquis will return a new licence file which can be uploaded to the system. Copy the returned licence file onto the machine and then choose the *Import Licence...* option.

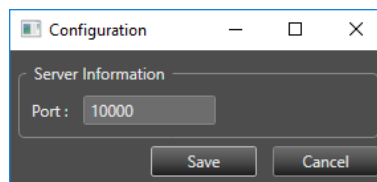
This will open a windows browser, from which it will be possible to navigate to the licence file and process the import.

Once imported, *Stop* and *Start* the service using the buttons in the Manager to apply the changes.

9.2.2 OTHER CONFIGURATION OPTIONS

9.2.2.1 CONFIGURATION

The Configuration button will open a dialogue that will allow the communications port to be altered. The default value is 10000.

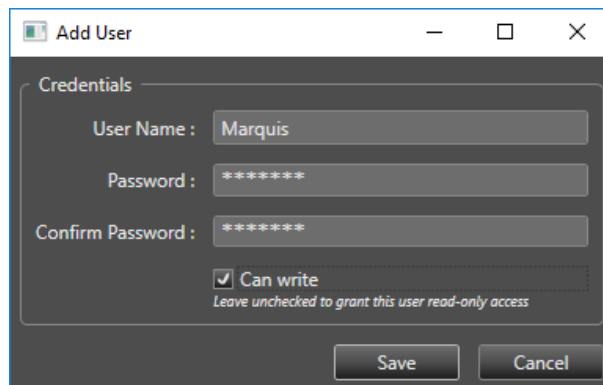


9.2.2.2 MANAGE USERS

User connection details will need to be added into the configuration to allow the Remote Location Server to be accessed by the applications.

Selecting the *Manager Users...* button.

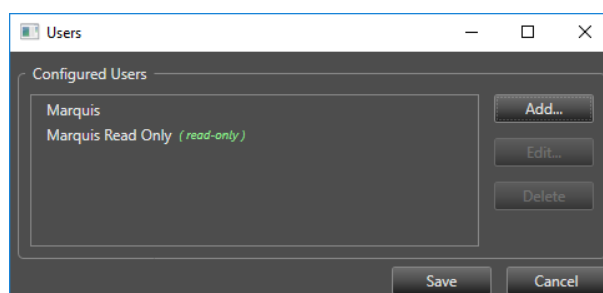
And then select *Add...* to configure a user.



Enter a *User Name* and a *Password*.

You can also control the access that user has by choosing whether to give them write permission. Select *Can write*, if this user will be allowed to write into the system.

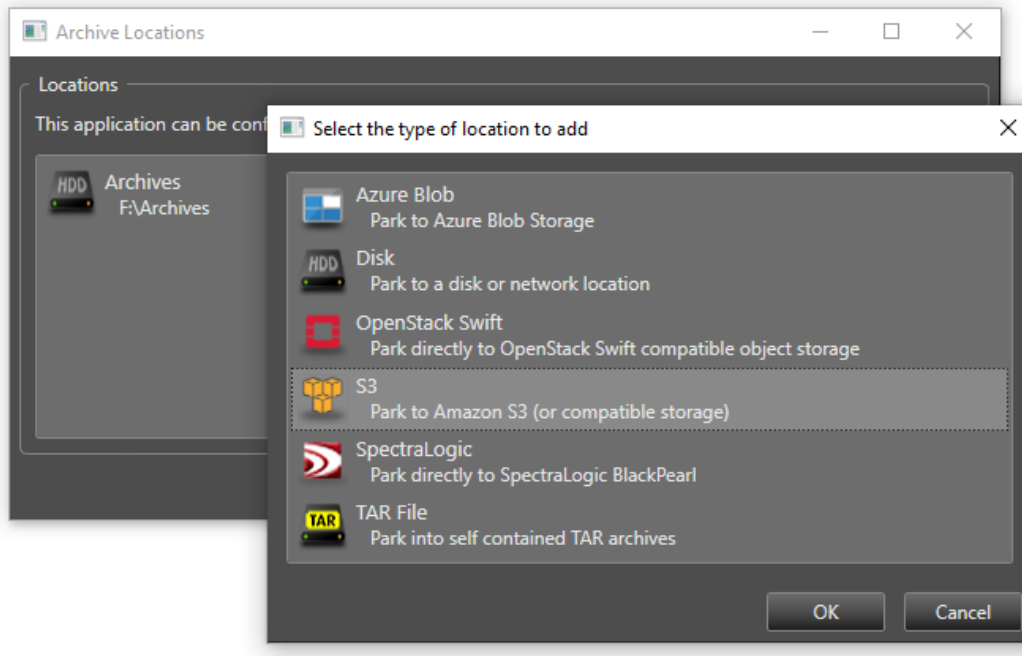
If the user does not have this option enabled, they will only be able to read content through the Fotonflite connection.



Stop and Start the service using the buttons in the Manager to apply the changes.

9.2.2.3 ARCHIVE LOCATIONS

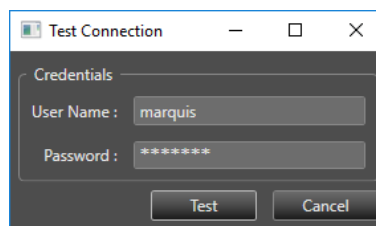
The Remote Location manager will allow archive devices or locations to be configured and then presented across to the client applications. For example, a site may have an S3 based object storage system. This can be configured within the manager and will become available to the Marquis client application that is connecting remotely over Fotonflite.



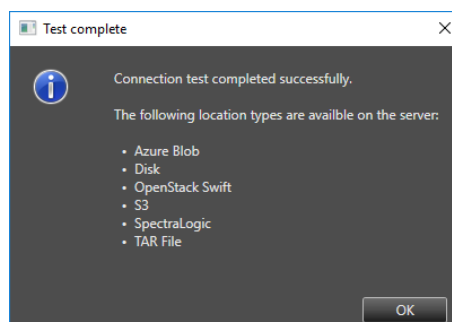
The type of location can be selected from the list presented and then configured as required. Details on the configuration of each location type is available within the main Project Parking manual.

9.2.2.4 TEST...

The Test option allows the user account to be checked and confirmed.



If the details are correct the following response is shown: -



You will find answers to most frequently asked questions on our website:

<http://www.marquisbroadcast.com/>

You can contact Marquis Support at Support@marquisbroadcast.com